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CHRONIC INTESTINAL OBSTRUCTION BY BANDS AS A SEQUEL OF APPENDICITIS. OPERATION. RECOVERY.

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APPENDICITIS is frequently accompanied by the formation of peritoneal adhesions which mat together the coils of Intestine in the neighbourhood. In cases where recovery takes place without operation it is remarkable how these adhesions disappear and, if the abdomen be opened at a subsequent period, all trace of them may have been removed. On the other hand firm adhesions may remain and the appendix may be found, after all acute symptoms have subsided and possibly months after the attack, firmly fixed in position by adhesions either to the parieties or to neighboring viscera. Under these circumstances it is somewhat remarkable that obstruction of the bowels is not a more common sequel of appendicitis than it is. The possible method of its production is illustrated in the case which I now record. A child 10 years of age was admitted under my care with symptoms of general peritonitis and acute obstruction the origin of which was obscure. Appendix trouble was suspected but no certain diagnosis was made. She recovered from the attack without operation but subsequently developed symptoms of chronic intestinal obstruction which occasionally gave rise to alarming conditions during which the obstruction threatened to become complete. During these occasional seizures she suffered intense pain, the abdomen became distended and she only obtained relief after a free action of the bowels. These occasional attacks were considered sufficiently serious to warrant operation, in fact the patient was apparently thrown into a critical condition on each attack and it was feared that operation would become imperative during one of these seizures and that under such circumstances laparotomy would be necessary under unfavourable conditions. The abdomen was opened a few days after recovery from one of these attacks and the condition investigated. It was found that there were two kinds in the small intestine and that the appendix was adherent to the point of attachment of the peritoneal adhesions which were the cause of the kinking. The intestine was freed and the appendix removed after which the patient made a good recovery and subsequently the symptoms of obstruc-

tion no longer manifested themselves. The details of the case are as follows:—

E. S. aet. 10 years was admitted under my care in the Hospital for Sick Children on February 6th, 1902, the patient was referred to me by Dr. Charles Wagner, who gave me the following history of her condition previous to her admission into Hospital. The child had been healthy and quite well until Tuesday, February 3rd, when she was suddenly seized with severe abdominal pain and in spite of her efforts to produce a movement of the bowels she was unable to accomplish it although she had taken purgatives freely. Dr. Wagner saw her the following morning and attempted to get the bowels to act but she vomitted magnesium sulphate which had been administered by the mouth and the enemata, which had been given were ineffective. The following day the symptoms of obstruction were still more marked, there was frequent vomiting of greenish fluid and she was unable to retain anything on her stomach, towards evening she was sent to the Hospital as the symptoms were considered urgent. I saw her there on admission about fifty hours after the onset of symptoms. The bowels had not moved for three days. There had been very severe abdominal pain and marked distension. The pain was confined chiefly to the region immediately below the umbilicus, nothing could be detected of abnormal character in the right iliac fossa and neither was anything revealed on rectal examination

On admission to the hospital she had a temperature of 100 3 F. pulse 144, respirations 44, she had the characteristics facies of abdominal distress, the tongue was furred and patchy, the breath was sweet. The abdomen was much distended, very tense and rigid and exquisitely tender. The tenderness however was most extreme immediately below the navel over an area about three inches in diameter and situated in the middle line. The Tympanites was general: there was no area of dulness and no tumour palpable. As the case seemed urgent and one of complete obstruction I ordered immediate preparation for operation. I however thought it wise to try a turpentine enema first and contrary to one's anticipations this proved slightly effectual. The pulse dropped a little in frequency and we thought it safe to postpone operation until the next morning. A second enema was administed at 6 a.m. the following day, and a large very offensive movement resulted. The pulse had come down to 128 and the respirations to 24, whilst the temperature was 99.3. The vomiting, which was a marked feature at the time of admission, became less frequent, and the abdomen less tender and gradually all alarming symptoms disappeared. The bowels moved very freely during the next few days and she seemed to be on the road to complete recovery, when on Feb 11th, five days after

entering Hospital, she developed a rash of a diffuse character, appearing first over the front of the neck and chest. At first this was thought to be of a septic character, but subsequently it proved to be scarlet fever, and she was transferred to the infectious wards where she ran a course of scarlet fever of moderate severity without complications. She was discharged from hospital on April 4th. The nurse in the infectious ward has since informed me that occasionally the child complained of cramp in the abdomen which was relieved after a free passage of the bowels. After the child went home, the mother noticed that the abdomen was unduly prominent, and she applied a binder to support the abdominal walls. The child was somewhat anxious lest an operation would be necessary if further trouble manifested itself and she, of her own initiative, took pains to keep the bowels regular. Purgatives were employed and the bowels were moved twice daily with marked regularity. She remained well until Sunday, April 20th, when suddenly, in the afternoon of that day she was seized with severe cramp in the lower part of the abdomen, she took a dose of liquorice powder at four p.m , and at eight in the evening there was an enormous movement of the bowels, this was described as brownish, semi-solid stuff, with the vilest possible stench. During the night, several other large movements of similar character followed, and in the morning she had complete relief of troublesome symptoms. I saw her the day after with Dr. Wagner in consultation, and we concluded that we had to deal with a case of chronic intestinal obstruction, the cause of which was obscure, and advised operation for relief. The child was readmitted at the Hospital for sick children, for this purpose, on April 23rd, 1902. Two days subsequently, she was suddenly seized with severe abdominal pain, which came on after her dinner, the bowels had moved that morning. The pain only lasted a few hours, however, and disappeared after the application of turpentine stupes to the abdomen. It was evident that operation was imperative, as there was a possibility of the child developing serious and urgent symptoms at any moment. I therefore operated with the assistance of Dr. Wagner on April 30th.

The usual preparations for abdominal section were made and, under chloroform, I made an incision in the middle line below the umbilicus about three inches in length and explored the abdominal cavity. Small intestine, apparently normal, first appeared but below this one found the bowel distended, and the lower part of jejunum firmly tied down to the base of the sacrum by a dense band as thick as an ordinary lead pencil; the gut was fixed here so as to form a V, the left limb was continuous with the distended bowel above whilst the right limb of the V was collapsed. I secured this band by a silk ligature and divided it, thus freeing the gut.

I then overhauled the gut below the band and found, beyond the collapsed segment, that the bowel again became somewhat distended and a second V shaped piece of gut, about 10 inches from the ileo-cæcal valve was found tied down in a similar fashion near the point of attachment of the first. This was divided in the same manner as the first band and the Intestine was thus freed. I now began to suspect the Appendix as the probable source of the trouble; and, on investigation, I found the tip of the appendix was also firmly adherent to the posterior wall of the abdomen, near the point of attachment of the two bands. I freed this and found that the appendix which was short, about two inches in length, was considerably thickened. I removed the appendix in the usual manner and closed the abdominal wound. The patient made an uninterrupted recovery and has subsequently presented none of the symptoms of abdominal trouble which previously distressed her.

The manner in which Obstruction is treated in this case is obvious and the primary cause was no doubt an attack of appendicitis. It was fortunate that we were able to tide the patient successfully over the first attack when she was critically ill and when complete obstruction threatened. Had we been compelled to operate then her chances of recovery would have been very much reduced.

When one is operating for strangulated hernia one observes what I believe is or ought to be the universal custom, in making certain after the division of one constricting ring tissue say at the external ring, that no other constricting agent exists. The good old rule should, in my opinion, always be observed of pulling down the gut into the wound after dividing the construction to make sure that the gut above is normal in appearance and shows no sign of further constriction. The value of this observation was early impressed upon me when, as house surgeon, some sixteen years ago, I assisted a well known London surgeon in an operation for strangulated inguinal hernia. A man 22 years of age was admitted to hospital with a right strangulated inguinal hernia. During the operation two distinct constricting bands were divided one at the external ring and the other higher up the inguinal canal near the internal ring. The hernia contained both bowel and omentum, the latter was removed after ligating with silk, the bowel was returned into the abdominal cavity.

Symptoms of obstruction persisted to some extent subsequent to operation and the man died 46 hours after.

In my notes which I made of the case at the time, and from which I am now quoting, I find that post mortem we discovered a piece of gut was still strangulated. This was about four inches long and was constricted by a ring membrane which was derived from the stump of the

omentum. Thus there had been three constrictions. The case impressed upon me the importance of observing the rule to which I allude in operating for strangulated hernia and illustrates the possibility of more than one constricting agent in cases of strangulation. The same principle of treatment should be observed in operating for strangulation within the abdomen and the case which I now record is a good example to impress the importance of the observation. One might have been tempted to close the abdomen after the first V portion of gut was relieved from constriction, particularly as no immediate evidence of further trouble was observable; but on making search I discovered the second constriction and relieved it; had I not done so I would have failed in my efforts to obtain a cure.

The case which I now record is therefore instructive as an illustration of a form of chronic intestinal obstruction which may follow an attack of appendicitis and it is further interesting from the fact that kinking, with obstruction occurred at two distinct portions of the small intestine.

CAESAREAN SECTION, COELIHYSTEROTOMY, GASTROHYSTEROTOMY.*

N. E. MACKAY, M.D., M.R.C.S., Eng., Senior Surgeon to the Victoria General, Halifax.

This operation antidates the Christian era. For years it was confined to post mortem cases. It consists in the extraction of a child from its mother's womb through an incision made in the abdominal and uterine walls. Some claim that it had its origin in the birth of Julius Caeser. Others again say that it received its title in the phrase caeso matris utero in the description of the operation (Pliny). However, be this as it may, one thing is certain the name Caesarean Section was very early given to the operation.

The first to perform the operation was Jacob Nufer a butcher, or sow-gelder, of Switzerland. He performed it successfully on his wife in 1498. The first one recorded by a regular practitioner was by Troutmann of Germany in 1610. During the first 250 years of the history of the operation, no attempt was made to close the urine wound by sutures. For the healing of the wound and the prevention of bleeding, surgeons relied solely on the contractions of the uterine muscular fibres. The first record we have of stitches being used was by a French surgeon, named Le Bras, in 1769. Fully one hundred years elapsed before the general introduction of sutures in closing the wound. In view of these facts is it any wonder should the mortality be high in the early history of the operation ?

Read before the Nova Scotia Medical Association, July 2 and 3.

In Vienna the operation was done for one hundred years without a successful case (Godson). In the Maternité in Paris similar results were recorded. Chaira of Milan collected 62 operations with only two recoveries. In England during the eighteenth and part of the nineteenth century an almost equally dismal record was obtained. Here and there a successful case was reported but not by leading surgeons who were as a rule opposed to it. Instances of women performing the operation on themselves are recorded. One of the most remarkable of these was a patient who, two hours after operating on herself, walked a kilométre, breakfasted with her sister, walked about for some time and recovered (by medical aid)* More remarkable still are the recoveries after laceration of the pregnant uterus with the horns of oxen. Harris collected 14 such cases and only four died and two of the four dead women left living children, and and in four cases both mother and child lived.

Porro, of Pavia, not satisfied with the results he had obtained with the operation, devised in 1876 a substitute, familiarly known as Porro's operation. His operation was a partial hysterectomy. He treated the pedicle in the lower angle of the wound. The advantages Porro claimed for his operation were that it lessened the danger of hæmorrhage and sepsis and removed the possibility of a future pregnancy. Since then the operation has been improved upon in various ways by Veit, Bair and Freund.

Very soon after the introduction of Porro's operation, Sanger of Leipzig, in 1882 proposed the closure of the uterine wound by a double row of interrupted sutures,but Leopold was the first to carry out the suggestion. This, the greatest of all advances, so improved Caesarean Section, as to greatly limit the application of Porro's method, and ought almost to banish craniotomy on the living child from the recognized list of legitimate obstetric operations.

It is interesting to compare the mortality of the old Caesarean Section with that of the improved. A fair estimate of all cases operated upon by the old method gives a mortality of 80 or 90 per cent. Meyers collected 1605 cases operated upon in Germany, France, Italy, Britain and America with only 54 recoveries. Bedford's tables of operations in Great Britain gives 131 cases with 23 recoveries. In America, Harris gives 134 operations with 53 recoveries.

On the other hand, with the improved method (Sanger-Leopold), the average death rate may now be put at 15 per cent. Up to 1890, 153 Sanger-Leopold operations have been performed in eleven countries with a mortality of 29 per cent. Between 1880-91 Sanger himself had 35 operations with only 2 maternal and 2 foetal deaths. Prof. Leopold in his

*Recorded by Von Guzenberg.

latest report records 95 recoveries out of 100, but other German operators have not been so successful. The general average mortality of German surgeons is 10 per cent. They have paid greater attention to the technique of the operation than surgeons of other countries, hence they have the highest percentage of recoveries. The French tables show almost equally good results. In America, the record is not so good. The reason of this is that the operation is as a rule too long delayed. It is not resorted to until every other method has failed, and the parts are bruised and often torn, and the patient's strength is exhausted.

The indications for operation are absolute or relative; absolute, when the pelvis is so contracted that delivery of a living child per vias naturales cannot be effected. It is relative, when there is a choice between it and other methods, but where caesarean section may be considered to give the best chances to the mother and child. The indications are furnished by a generally contracted pelvis, by tumors and growths obstructing the passage, and by cancer of the cervix. Placenta praevia and eclampsia may call for the operation. The alternatives are induction of premature labor, symphysiotomy, craniotomy forceps, and version.

The indication is absolute when the child is viable and the conjugate diameter measures 6.5 or 7 centimeters or less, or when the child is dead, 4.5 centimetere or less (Kelly).

The relative indications must be determined by the circumstances of each individual case, and partly by the wishes of patient and friends.

On the best time to operate authorities differ. Some prefer to operate at full term and before labor begins. Others again would rather wait till the patient is in labor and the os dilated. For my own part I am in favour of deferring the operation till the os is dilated as then better drainage and uterine contraction can be secnred.

The following case I had in my hospital practice in April last. I believe it is the first of the kind we ever have had in that institution :—

Mrs. C. coloured, age 43, a primipara at full term, was sent to the V. G. H. on April 13th, 1900, by Dr. M. A. B. Smith, of Dartmouth, for operation. She had been in labor over three days. The patient was a resident of Preston, and had to drive 12 miles in an open cart, in a downpour of rain to get to the hospital. She arrived at three p.m., and a consultation was held at once at which it was decided to perform a conservative caesarean section, or gastrohysterotomy. She was examined aseptically. The os uteri was dilated the size of a fifty cent piece and the head was presenting— occiput anterior—but it had not engaged in the brim of the pelvis. The promintory of the sacrum was well marked, and the true conjugate diameter measured about 7.5 centimeters (3 in.).

There was a cone-shaped contraction of the pelvis and the distance between the tuber ischii was about 8.5 centimeters (3½ in.). No foetal heart nor uterine souffle could be detected, and palpation failed to detect any movements of the child. The patient, however, assured us she felt the child moving on her way to the hospital. Uterine contractions were feeble. The waters broke two days prior.

The patient was prepared for operation, as quickly as possible, by scrubbing the parts with soap and water, and then washing them with ether and lastly with mercuric chloride solution, I in 500, and the vagina was thoroughly douched with a similar solution.

Chloroform was the anaesthetic used. Opened the abdomen by the median incision. The incision extended from two inches above the umbilicus to within two and a half inches of the pubes. It was about six inches in length. To prevent any liquor amnii or blood getting into the abdominal cavity, an assistant with a hand in each flank pressed the uterus well forward against the anterior abdominal wall and held it firmly there. No effort was made to locate the placental attachment; its situation being unimportant, I first made a clean cut 2½ inches in length vertically downward, in the middle of the anterior surface of the uterus, beginning two inches below the fundus. This incision came right down on the placenta. The bleeding was quite free and to control it I instantly inserted two fingers in the wound and gently but rapidly separated the attachment of the placenta on one side of the incision and enlarged the wound downward with scissors, using my finger as a guide, and in a similar way extended it upwards to the fundus. I made the uterine incision 5 inches long. During all this time I kept my hand constantly in the wound to control the hemorrhage which I succeeded in doing fairly well. To ensure strong uterine contractions, and so lessen the danger of hemorrhage after emptying the uterus, and at the same time promote spontaneous separation of the placenta, I ordered at this stage, an assistant to inject half a drachm of antiseptic ergotine in her arm. This had the desired effect. I now inserted my hand into the cavity of the uterus, took hold of the child by the legs and extracted it easily. The cord was divided between two pressure forceps and the child which showed no signs of life, was handed to Dr. Smith to look after. The placenta was peeled off easily and it, together with the secundines, was removed and the cavity of the uterus cleared of clots. There was considerable oozing from the uterine sinuses, so much so, that I was obliged to pack the cavity of the uterus with iodoform gauze. The organ was now eventrated and surrounded with warm sterilized towels and pads, and constant pressure was kept on the edges of the wound by an assistant till

all bleeding had ceased which occurred in three or four minutes. Hardly a drop of amniotic fluid or blood got into the peritoneal cavity. The gauze packing was then removed and the uterus carefully cleared of all clots and the wound closed after the Sanger- Leopold method by a double row of interrupted sutures as follows :—The peritoneum along the margin of the incision was detached from the muscular fibres for a short distance (¼ in.). This made it possible to turn in a greater amount of serous membrane. The deep sutures were then inserted. They were placed three-fourths of an inch apart, and were made to enter at about half an inch from the edge of the wound, pass obliquetly through the muscular tissue and emerge near the bottom of the cut surface. The superficial sutures were then placed, two between each deep suture. The needle was made first to pierce the peritoneum and muscle, come out a little below the lip of the wound ; then to pick up the free edge of the peritoneum on the same side. A similar course was pursued, in opposite direction, on the other side. They were after the fashion of a Lambert suture. The superficial sutures were first tied and they brought into accurate opposition two strips of serous membrane. Then the deep sutures were tied, causing still further incurvation of peritoneal surfaces and closing up and strengthing the whole. The toilet of the peritoneum was now attended to and the uterus on being thoroughly douched with sterilized saline solution and dried, was returned into the abdominal cavity, and the abdominal wound closed as after an ordinary laparotomy :— The peritoneum by a continuous suture of catgut, the aponeurosis by interrupted sutures of catgut, and the skin by interrupted sutures of silk-worm gut. The operation occupied forty minutes in its performance. Drs. Chisholm and Farrell assisted.

The patient stood her operation well. At 9 p. m. her pulse was 120 and temp. 99. She had a good deal of pain in the night in right arm and leg ; was given ¼ gr. morphine at three in the morning, after which she rested well.

14th. 8 a. m. still complaining of pain in left arm and leg. The next 24 hours pulse ranged between 108 and 110, and temp. 98.4 to 99.4 ; respiration from 28 to 36 ; stomach good till early evening when she felt a little nauseated, and was troubled with flatulency.

15th. Report for next 24 hours ; was at times very distressed from tympanites ; gave an enema of soap suds and turpentine ; some flatus was expelled and the bowels moved slightly ; this gave her some relief. Ordered grs. 2 of calomel every two hours ; till 8 grs. were taken. The enema was repeated at 7.10 p. m. ; no effect ; Pulse ranged from 88 to 100 and temp. 98.4 to 99.

At 9 ordered an ounce of caster oil and a high enema of turpentine four hours after. No effect. Patient very distressed with flatulence, Slept a little through the day and night. Temp. at night 97 to 98 and pulse 74 to 88.

16th. Enema of ox-gall. No effect. Stomach greatly distended with gas and patient very distressed. Stomach very irritable. At noon gave her again an enema of turpentine with no relief; put her in knee-pectoral position; no relief. Washed out her stomach and removed 2 quarts of a dark brown liquid therefrom, having a distinct fecal odour. Pulse 104 but it had no volume; temp. normal. Ordered gr. $\frac{1}{20}$ strychnine every two hours. 4 p. m. patient very restless; Pulse more rapid and feeble. Stomach keeping very irritable and abdomen greatly distended. Patient rapidly sinking.

At 10 she vomited quantities of stercoraceous material. Died at 11 o'clock at night.

Post Mortem :—Uterus about normal size for third day after labor. Nothing to indicate septic peritonitis found. Bowels were somewhat congested, also the peritoneum. Uterus pressing on sigmoid flexure, at brim of pelvis. No impacted faeces in intestines. A small quantity of serous fluid in the abdominal cavity. Wound in uterus closed except at one point through which fluid escaped, on manipulation.

This patient evidently died from intestinal obstruction. What was the cause of the obstruction? It was not peritonitis. Her pulse did not indicate peritonitis. In cases of peritonitis I do not attach so much importance to the temperature as I do to the pulse. The volume of the pulse was good till 12 hours before her death. Then again the post mortem proved she did not die of peritonitis. There was no evidence of inflammation present. The obstruction here must have been caused by over-distention with gas. This condition is known as pseudo-ileus. Dr. Greig Smith says he has demonstrated that intestinal over-distention by kinking of the bowels and paralysis of the intestinal muscle, was a cause of true obstruction. The treatment for such cases is free purgation. I strenuously endeavoured to get free operation of the bowels but failed. Could I have done any thing else to save my patient? I think I could. Observe the condition present; A pseudo-ileus and a heavy uterus jammed in the brim of a contracted pelvis and pressing on a loop of the large bowels. The pressure of itself on a semi-paralyzed loop of bowel might have caused all the mischief. I was tempted to reopen the abdomen and remove if possible the cause of the obstruction. If ever again I have a similar case I will do so.

A CASE OF HERNIA OF THE BLADDER.

By E. R. SECORD, M.D., Brantford.

HERNIA of the Urinary Bladder, whether alone, or complicated by coincident hernia of other organs, is a sufficiently rare condition to merit that each case should, in at least a brief form, be put on record. And in this class I would not include those somewhat rare conditions of "Ectopia Vesicae," caused by defective development of the anterior abdominal and visceral walls, but only those cases where the bladder forms the part or the whole of a hernia descending through the ordinary canals for other forms of that condition.

The condition as already mentioned is somewhat rare, the more common cases being those in which the bladder forms only part of the herniated mass, and it appears that, in these cases at least, the hernia of the intestine has usually preceded that of the bladder, the latter only becoming involved when the hernial sac has become large enough to exercise direct traction on the peritoneum covering the posterior wall and fundus of the bladder. Added to this cause there would also seem to be exerted the influence of old age in producing relaxation of the tissues, and again possibly in some cases obstructive causes may be active, such as an enlarged prostate producing dilataion of the bladder, with secondary thinning of its walls, and, in many cases, definite sacculation.

The symptoms which the condition produces are rarely definite enough to allow of a pre-operative diagnosis. Occasionally there is pain and a dragging sensation in the hernia during micturition, and again, in some cases a truss causes such pain as to almost prevent its being worn. This is probably due to the adhesion between the bladder and the sac wall, which prevents the complete reduction of the former, and hence causes the truss to exert undue pressure on part of this sensitive organ.

If for any of these reasons the condition be suspected, a radical cure by one of the many accepted methods, should be immediately done, both to relieve the present symptoms of the patient, and to prevent that increase in the size of the hernia, with increasing probability of strangulation, which is so likely to occur from the failure of the truss to perfectly retain the mass.

The prognosis, in cases which have not been operated upon, is distinctly worse than in uncomplicated cases, owing to the increased probability of strangulation. In unstrangulated cases which are subjected to operation, the prognosis should not be any worse than in ordinary radical cure, if the condition be suspected. Where it is not suspected the danger of opening the bladder in removing redundant sac, or indeed of tying off the whole herniated portion of the bladder, if the unmodified

Bassini operation is done, followed by urinary fistula, or even death from peritonitis due to leakage, renders the operative prognosis more unfavorable. Of strangulated cases the same may be said, the danger, aside from that due to the intestinal lesion, is in proportion to the lateness of the discovery of the condition of the bladder.

I may now give a brief account of a hitherto unreported case of this condition.

In April, 1902, I was asked by Dr. Gamble, of this city, to see a patient of his, who had apparently an ordinary strangulated hernia.

The patient was a well preserved, vigorous old man of seventy-three years, who had had the hernia for forty years. It had been only fairly well retained by the truss, but when it had come down was hitherto easily returnable. According to the history it had been down now for about four hours, but the condition of the bowel as afterwards revealed, would lead one to suppose that it had in reality been down somewhat longer.

The herniated mass, on right side, was large, very tense, exceedingly painful, and presented all the ordinary symtoms of a strangulated scrotal hernia. It was quite irreducible, even after chloroform anaesthesia had been produced.

Operation was advised, decided on, and carried out in quite the ordinary manner. On opening the sac several ounces of blood stained serum escaped. The hernia was now seen to consist of about eight inches of the small intestine, closely and firmly adherent coil to coil, but not at all adherent to the sac wall. The intestine was distended and tense, its wall was in part black, but everywhere retained its lustre. The ring was slightly nicked above and to the outer side, and the intestine drawn down somewhat for closer examination. The distal portion was quite healthy and almost collapsed, while the proximal portion was so distended that it could not be drawn down to any extent. A finger inserted alongside of it felt, as far as it could reach, distended coils of intestine, with almost solid contents. Evidently there was a condition of chronic obstruction from the flexions produced by the bands, as well as the acute obstruction produced by the strangulation. As, however, the patient's condition hardly encouraged the performance of a resection, the whole mass was returned, with the idea of making an artificial anus should the symptoms of obstruction still persist.

An effort was then made to isolate the sac from surrounding parts, and after much difficulty, owing to the closeness and firmness of the adhesions, this was effected. On examining the sac I now found that its inner wall was apparently composed of two layers, which, with the thumb

inside the sac and the fingers outside, could be moved the one over the other. I at once became suspicious of hernia of the bladder, and tried to define the extent to which these two layers were carried, but this I was quite unable to do, owing to the thickness of the sac wall at this point, so that the light showed no dividing line between the double and single layer, nor could I, by any gentle handling, separate the bladder, if such it was, from the sac wall.

I, therefore, placed a temporary catgut ligature around the neck of the sac, and slowly cut across the neck from without inwards towards these two layers, which when slightly nicked, separated and exposed a cavity lined by a pinkish mucous membrane. This cavity was continued downwards on the inner side of the sac for about four inches. Feeling confident now that this was in reality bladder, I closed the opening with Lembert sutures, a difficult proceeding owing to thinness of the bladder walls at this point, returned the bladder within the ring, removed the external portion of the sac and closed the peritoneal opening with catgut. Iodoform gauze was packed down to this point, to afford drainage for leakage should it occur, and the usual operation completed, with the exception that the external ring was not closed so tightly as usual owing to the presence of the gauze.

No leakage having occurred, the gauze was removed on the fourth day, and the old gentleman made a quite uneventful recovery.

In conclusion I may say that the chief difficulty in the case occurred in closing the peritoneal opening of the neck of the sac, without including the bladder at the inner side, but it was done as completely as possible by the use of catgut sutures passed across the neck of the sac, and through its walls, on a fine needle.

I must apologize for the incompleteness of this report, and offer as my excuse the fact that ill-health compelled me to leave the city shortly after the case occurred, and before I had been able to commit all the details to my case books. They have, therefore, been filled in partly from memory. However, I trust that the most interesting features have been mentioned.

LYMBURNER V. CLARK AND HOPKINS.

Before Hon. Justice Ferguson, without a jury.

Cayuga Spring Assizes, A. D. 1902.

Mr. C. W Colter, K.C., and Mr. A. K. Goodman for Plaintiffs.

Mr. F. V. Teetzel, K.C., and Mr. W. D. Swazie for Defendant Hopkins.

Mr. G. L. Staunton, K.C., and Mr. J. C. Eccles for Defendant Clark.

JUDGMENT.

I think that in the circumstances I am not called upon to consider over again the evidence and elaborate a judgment.

The proper conclusion on the evidence seems to me perfectly plain.

These defendants are sued for negligence or want of skill in their profession.

Many gentlemen of their own profession are called and give their evidence in the witness-box saying that the course pursued by these defendants would have been pursued by the majority of practitioners in the Province ; and some of these gentlemen say that they have pursued it themselves. Even the doctor called by the plaintiffs, Dr. McCallum, says, "I have heard the description of the injury and of the treatment of the injury by the defendants. I say the treatment was such as many practitioners adopt at the present time."

As a rule, when a doctor is sued for negligence, and other doctors come forward and say that they would have adopted the treatment that he pursued, the court says that he cannot be convicted of negligence. All he is called upon to do is to bring into the treatment of the case reasonable skill and reasonable diligence.

Some doctors make a suggestion that something else ought to have been done. They do not go on and say that that not being done was the cause of the disaster. But when so many men high up in their profession come forward and give the evidence they give in regard to the treatment of this case how can I convict those two men as being guilty of negligence or want of skill ? It seems beyond question that I cannot do that. Remarks were made in regard to those gentlemen that I am far from adopting the meaning of. I cannot bring myself to believe that so many medical gentlemen would be willing to come here and prop up a case by swearing what is untrue or by giving a false opinion, as counsel has contended I should do. I saw nothing in the evidence of those gentlemen to indicate that there was any bias. I cannot say so much in regard to witnesses called for the plaintiffs. On the question of veracity, there is the plain fact here that husband and wife—the father and mother of the child—practically contradict each other. The husband's attention was called to the circumstance, and all he can do is to say that his wife is wrong.

However, the ground upon which I put my conclusion is that these men are charged with want of skill or negligence in the treatment that they adopted in dealing with this injury ; they call gentlemen of the same profession—men of the highest respectabilty, as I think, and some

of them, I think, at least of the highest reputation—men possessing talents which they discovered to me in the witness-box—men of good health, high education, manifestly understanding the subject they are speaking of;—and they say this treatment would have been adopted by the majority of practitioners in the country. It is possible this evidence is all untrue; but I cannot arrive at that conclusion at all. I think the plaintiff, even upon his own evidence has not made a case; but when I take the evidence of this long line of highly qualified and respectable practitioners—take the evidence of their opinion in regard to what was done—there is no conclusion that I can arrive at but that the case fails. I have no hesitation whatever in giving judgment dismissing the action with costs as against both defendants. I order and direct that after thirty days judgment be entered dismissing the action with costs.

A PLEA FOR THE SURGICAL TREATMENT OF APPENDICITIS.*

By D. CLOWES VANWART, M.D.

(University of Pennsylvania), Frederickton, N. B.

MUCH has been written and said on the subject of Appendicitis. I shall make no attempt to treat the subject *in extenso*, but rather base my remarks on personal experience with no references to text books, etc.

We may classify diseases of the vermiform appendix in point of time, as primary and recurrent. Clear cut symptoms are not present in every case, this being particularly true in the first twenty four hours of the disease. The tripod of symptoms which prevent an error in diagnosis are:—

1. Pain: at first, sudden and acute, referred to the epigastric or umbilical regions; later becomes localized over the site of the appendix.

2. Rigidity: this follows the localization of pain and is most marked in the right lower quadrant of the abdomen.

3. Tenderness in the right lower quadrant of the abdomen: this being a constant symptom from the beginning of the attack.

Pain at first colicky is most marked in acute cases and may last only a few hours: as in those cases where the pus forms rapidly. Tenderness is the most constant of these symptoms as would be expected from the fact that inflammation is present. The point of maximum tenderness is always between the attachment of the appendix to the caecum and its apex. In recurrent attacks the only positive symptom is tenderness; and

*Read at a meeting of the Maritime Medical Association, Charlottetown, P. E. I., July 9th, 1902.

when these attacks are mild diagnosis is often difficult, particularly so in the female sex. In cases that are seen early the position of the appendix can be determined, but if the organ contains pus and the sac has ruptured its location becomes a more difficult matter.

It is not my intention to enter into the minutiæ of differential diagnosis. Obscure cases of enteric fever may sometimes be confounded with an attack of appendicitis since pain in the ileo-caecal region is present in the early stages of both diseases; but the pain is less acute in the former and there is not the muscular rigidity. Influenza of the digestive type is often at first confounded with a mild attack of appendicitis. Many cases of indigestion are the reflex symptoms of an inflamed appendix.

To illustrate: H. G. L., male, age 24, consulted me in April 1901 for indigestion, I learned from him that "just two years ago he had suffered from a severe attack of cramps that left him sore." He had been taking remedies with more or less regularity up to the time of consulting me. During an acute exacerbation he would have nausea, vomiting and abdominal pain, and was improving from such an attack when I first saw him. On examination I found marked tenderness about the so called "McBurney's Point" with temperature and pulse normal. The patient consented to an operation and was at once removed to the Victoria Public Hospital. The appendix was found post caecal, pointing toward the liver and adhering to the caecum. Two faecal concretions were present, walled off at the distal end of the appendix the latter showing chronic inflammation. An uninterrupted recovery followed the removal the appendix and there has been no recurrence of his former trouble.

The thermometer should not be relied upon for much assistance in diagnosis, since in the presence of pus there may be little or no rise of temperature. To illustrate: R B., male, aged 12, after considerable physical exertion suddenly developed intense pain in the abdomen. He had tenderness at first about the umbilicus. At the beginning of the third day the maximum point of tenderness was two inches below the edge of the liver in the right hypochondriac region. Third day temperature normal, pulse 90. I advised immediate operation, and found the appendix posterior and to the inner side of the ascending colon with a length of about four and a half inches. The distal end contained a sac of pus and was on the verge of breaking; but no adhesions were found. The appendix was removed and the patient made a rapid recovery.

To further illustrate: Mrs. F. C. H., aged 26. In this case the temperature never rose above 100° F., and the pulse was never below 110. The patient was operated on at the beginning of the third day, the

appendix being found ruptured and gangrenous with deposits of septic lymph on the neighboring parts. Prompt operation, removal of the appendix, and thorough irrigation of the affected area saved this patient's life.

As a cause, I have noticed that attacks have followed undue physical exertion as illustrated in case number 2 of this paper. The anatomical position of the vermiform appendix on the psoas muscle and the caecum filled with faeces is to my mind a sufficient cause to produce an irritated condition of this organ. Constipation was present in a majority of cases. In none of my cases have I found sufficient evidence to warrant the conclusion that an attack may be precipitated by over eating. There is in my opinion a close relationship between Appendicitis and Tuberculosis; fully twenty-five per cent. of my cases occurring in families of tubercular tendencies.

After opening the abdominal cavity I have always been able to find the appendix, except in those cases where it has sloughed off. Behind and to the inner side of the caecum is the most common position. In but one case have I found it to the outer side of the caecum. I have never found the appendix pointing toward the pelvic cavity except in the female sex.

Three cases that had been allowed to go on to pus formation, and the abscess cavities drained but the appendices not removed, subsequently came under my care for operation. In two of these cases the appendices were found small, contracted and curled on themselves and adhering posteriorly to the caecum In the third case the appendix was large, inflamed and contained pus, being bound down by adhesions to the outer side of the caecum. A rapid recovery followed the removal of the appendix in each case.

Should the appendix be removed in every case when the abscess is drained? It is not always possible to do so and even when possible is not always safe. In cases where the cavity is imperfectly walled off I should hesitate to disturb the parts; but should temporarily treat the abscess by irrigation and drainage. On the other hand, where the cavity is well walled off my treatment is to remove the appendix. Cases that are seen early and under constant observation and allowed to go on to pus formation with rupture are, in my opinion, improperly treated. It is needless to say that it is no uncommon thing to find an abscess at the first examination. I have seen cases in consultation where the attending physician, knowing that an abscess was present, hesitated about operating, but preferred to wait, hoping that the patient would improve under rest and medical treatment, thus totally ignoring the surgical principle that pus must have vent. An abscess should be suspected when tenderness

and pain continue, vomiting persists or distinct tumor felt. A rapid pulse is a reliable sign of suppuration. I have never seen a chill to denote that pus was forming. The case in which the symptoms do not subside in thirty-six hours from the on-set of the disease is an operative one.

The idea of this paper is to suggest early operation in inflammation of the vermiform appendix whether catarrhal or supperative. If early operation is insisted on the pus cases with faecal fistula and other annoying complications would not exist. I shall not consider the pathology of the disease or the treatment of its complications. The question is asked: "Should we operate in every case?" When the peritoneum is affected and distended, skin leaky, temperature subnormal, pulse rapid, feeble and compressible my answer is negative. In cases of this nature the system is overrun with sepsis and a *general* anaesthetic produces too great a shock. In such a condition I would prefer to use a *local* anaesthetic, opening the abdominal wall and irrigating as much as possible by means of a normal saline solution.

The arterial supply of the appendix is from the mesenteric artery which may be compared to the trunk of a tree with its branches. By ligating the trunk all supply to the appendix is cut off, and this makes practically a bloodless operation. I prefer ligating the artery and tying off the appendix with chromicized cat-gut, covering the stump with serous membrane if possible, and closing the abdominal incision with silkworm gut.

I am not an advocate of gauze drainage in appendicitis operations. This frequently causes excessive exudation of lymph which may result in annoying peritoneal adhesions and lifelong discomfort to the patient. Its use leaves a week spot in the abdominal wall inviting the development of hernia. It also acts as a foreign body; and I have known it to depress a patient as well as prolong the condition of shock. Iodoform gauze does not drain well and is very apt to cause iodoform poisoning. If the greater part of the toxic material be removed by careful irrigation the lymphatics and leucocytes will attend to the rest much better than the surgeon with any complicated device.

When I see a case in its early stages I try to avoid the use of opium and its alkaloids, since it locks up all the secretions, except that of the skin, and masks the progress of the case. Morphia may be used in small doses if the pain be very great. Fractional doses of Hydrargyri Chloridi Mitis and. Sodii bicarbonatis may be given to arrest the nausea and clear out the digestive tract, while enemas of soap suds with turpentine are found effective. The advantage of having the intestinal tract empty during an operation is plain to any surgeon.

After Treatment.

I do not give morphia for the reason already stated. Although the patient complains of pain it does not last longer than fifteen or eighteen hours. Cases do best on a liquid diet from ten to fourteen days. I have noticed that the tongue is much coated, and the breath offensive in some cases even in the presence of normal pulse and temperature and the patient on the road of rapid convalescence.

The following is copied from my case book: F.M., male, age 17, labourer. Previously in good health with no former serious illness. Week before consulting me had cramps for two days. Said he got some better. Constipation from that attack until I saw him, Nov. 15th, 1901. Night of Nov. 14th, 1901, attack of cramps, suffered all night. Nov. 15th 11 a.m. temp. 100°, pulse 100. Cramps and rigidity of abdominal muscles. Ordered turpentine stupes, enemas and fractional doses of calomel. Pain so great forced to give $\frac{1}{3}$ grain morphia hypodermically. 5 p.m. patient still in pain, enemas effective. Had to give another $\frac{1}{3}$ grain of morphia hypodermically. Advised immediate operation. Patient consented. Operated on at Victoria Public Hospital at midnight. Abdomen scaphoid. Tenderness greatest above McBurney's point. Incision two inches long. Appendix found post cæcal, pointing upwards with abscess in distal end ready to break. Appendix removed with ease. Wound closed. Temperature normal on third day after operation and continued so all through convalescent period. All of superficial and part of deep sutures removed on fifth day. Remaining deep ones on seventh day. Wound not dressed again until the twenty-first day. On the twenty-first day, patient fitted with abdominal pad, left hospital cured.

In conclusion I may say that my only cause for regret has been not that I operated upon a case of appendicitis, but that I did not operate earlier.

THE NATURAL HISTORY OF DISEASE.*

SIR THOMAS BARLOW, one of those who attended His Majesty in his recent illness, delivered the Address in Medicine before the British Medical Association in August. He chose for his subject "The study of the natural history of disease, the basis of all advance in its treatment." Twenty-five years ago, when the association met in Manchester, the Address in Medicine was delivered by the late William Roberts, on the acute specific fevers in their relation to contagium vivum.

Sir Thomas Barlow passed under review some of the advances that have been made during these twenty-five years. He drew a strong bow

* An abstract of the Address in Medicine before the British Medical Association.

and shot his arrow far. In passing he struck a severe blow at those who do all in their power to hinder the employment of experiment, one of the methods which contribute to make medicine an exact science. The progress of medicine has been along the lines of empiricism, and the survival of the fittest. There is good and bad empiricism. The former strives to follow nature's lead, and preserve that which is useful.

The study of diphtheria is profoundly interesting along this line. There was a time when all was chaos and confusion. Many were the disputes on the difference between croup and diphtheria. It began to be noted that sporadic cases occurred, and there were frequently a number of instances of mild sore throats before an epidemic of diphtheria occurred The mind began to grasp the thought that contagion must be often concealed, and carried by unknown agencies from place to place. The germ was discovered, and a new era opened up. It was found that during the growth of these germs in the system, either they produced a deadly poison, or acted on the tissues in such a manner that the latter gave out the poisonous ferment. Further study proved that the germs are often found in the throats of those waiting upon the disease, who show no symptoms of it, the throats being healthy the germs do no harm. Further study led Behring, Roux, Aaronson, Yersin and others to discover that the patient makes an effort to defend himself against these poisons, and that an anti-poison, an anti-body, an antitoxin is produced. The manifest alteration after the use antitoxin, even in unfavorable cases, is convincing enough that we have here a fundamental remedy of great potency. It has now been shown to be a remedy of value in the prophylaxis of the disease.

In rabies, though we know nothing of the micro-organism, it has been fully proven that the poison is lodged in the cerebro-spinal tissues. Pasteur and his pupils have given us the most brilliant results from their studies on this disease. It has been concluded that in the dried spinal cord, the germs are dead but that the immunizing substances remain active. The prophylactic value of the Pasteur treatment is beyond all doubt, though it is of much less value in the developed disease.

The discovery of vaccination was the outcome of long years of painstaking study, on the part of Jenner. But as time went on much knowledge was gained in addition to what Jenner gave us. The necessity for revaccination became apparent, by a study of smallpox epidemics and the protective value of vaccination. Then as experience grew, it became known that many of the bad effects of vaccination could be avoided by a pure lymph and a clean arm. The whole question of mixed infection came before the attention of the profession. The study of the natural

history of vaccination and pus germs has already yielded an abundant harvest.

While the antititanic serum has not yet been of much service in the acute cases, it has proven useful in the more chronic form. There is much to be hoped for here.

The study of the natural history of tuberculous diseases has brought forth much important information. It is now well known that many suffer from the disease at some time or other and recover. The human body must have a great deal of power to resist the tubercle bacillus, as is shown the large numbers of old tubercles found in persons after death. The discovery of tuberculin is of the utmost value as an aid to diagnosis of the disease, especially in cattle. The study of the disease has led to sounder views on treatment, and the open air method has done much. But the great advance is along the lines of prevention. We know the germ of the disease and its habits of life and growth. From these studies, we now know what must be done to prevent the spread of the disease: Sunshine, water, air, destruction of sputum, and safe-guarding those who are ill, are the foundation principles.

With regard to malaria, experimental research has established the connection between the mosquito and the disease. If care be taken to avoid being bitten by the mosquito, malarial districts have no dreads. This gives a new direction to prophylactic measures. But this has shown that under the name malaria a variety of conditions have been named that are not malaria at all. We now know also from scientific observation how quinine acts, and when it ought to be given to be most effective, by saturating the system when sporulation of the Amœbæ takes place in the blood.

It is now proved that the epidemic form of Cerebro-spinal meningitis is due to the diplococcus intra-cellularis. Some sporadic cases of great acuteness, where the pneumococcus is the germ found, go to show that meningitis may be caused by several forms of organisms. All this is due to the study of the natural history of disease.

The study of the thyroid gland has led to great advances in myxoedema and exophthalmic goitre. Much of what we know of "organotherapy" is due to these investigations. It has been shown that myxoedema can be produced in monkeys by the removal of the thyroid gland. Once more the natural study of the disease has laid the foundation for treatment.

So the study of acute rheumatism has led to the belief, almost proof, that it is due to a specific diplococcus.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

TREATMENT OF CHLOROSIS.

BURNET in the *Medical Press and Circular* says:—Rest, sunlight, and fresh air go hand in hand to promote a cure which is being brought about by careful and suitable dieting and a course of Iron. And in estimating our patient's progress we must examine the blood carefully from week to week—more especially the hæmoglobin. This is a very simple process, and readily acquired. A word of warning! Do not stop the treatment too soon. If you do, relapse and disappointment will result. Go on steadily for some months even after you have satisfied yourself that the blood has been restored to its normal state.

OPERATION UNDER LOCAL ANAESTHESIA.

MARTIN—*Cleveland Medical Journal*—operates with the aid of $\frac{1}{10}$ of 1 per cent. eucaine, for removal of hæmorrhoids. He passes his sutures before making the incision, and thus avoids the pain that so frequently accompanies the last stage of such operations.

THE ORIGINAL DOVER'S POWDER.

IN an article on Thos. Dover in the *Dietetic and Hygienic Gazette*, the original formula of the famous "Pulv. Doveri" by which he is known to posterity is given—the case is one of gout:—

"Take opium 1 ounce, saltpetre and tartar vitriolated each 4 ounces, liquorish 1 ounce, ipecacuanha 1 ounce. Put the saltpetre and tartar into a red-hot mortar, stirring till they have done flaming. Then powder them very fine; after that slice in your opium; grind these to a powder, and then mix the other powders with these. Dose: From 40 to 60 or 70 grains in a glass of white wine posset going to bed, covering up warm, and drinking a quart to three pints of the posset-drink while sweating."

"In two or three hours at the furthest the patient will be free from pain; and, though before not able to put his foot to the ground, 'tis very much if he cannot walk next day. The remedy may be taken once a week or once a month."

INFECTION IN UTERO WITH MALARIA, AND SMALLPOX.

THE July number of the *Kingston Medical Quarterly* has an article by Dr. D. E. Mundell, on this subject, with report of a case. The

views of many of the best known students of malaria are given which are to the effect that no truly demonstrative case of congenital infection has been published since the discovery of the malarial parasite. It is also claimed that the fœtus enjoys immunity against the anæmia and other secondary effects of the infection. In the case quoted by the writer, the mother suffered from repeated malarial attacks during the early months of her pregnancy, but had good health for some time previous to her confinement. The infant was healthy and continued to thrive for about two months when it began to lose flesh and show signs of pain. The blood was examined, the plasmodium was found, and the administration of quinine was before long followed by restoration to health.

The mother had removed in June to Kingston, a non-malarial district, the child was born in August, after which time mosquitoes (the Culex) are rare here; from the evidence, Dr. Mundell believes it was a case of intra-uterine infection. The blood of the mother showed nothing of import at the time the disease was discovered in the child.

In the same number, Dr. J. P. Boyle, of Casselman, Ont., reports a case of foetal small-pox. The child was born prematurely, but alive, fifty well-marked pustules were counted on the limbs, hands and feet. The parents claimed that neither of them had had small-pox, though three weeks previous to the birth of the child they had moved into their present abode—a house in which small-pox had existed for some time previously. The child lived twenty-four hours.

THE PRODUCTION OF ANAESTHESIA DURING SLEEP.

IN *The Medical Age*, July 25th, J H. Adams discusses the possibility of producing anaesthesia by the administration of chloroform to a person asleep without awaking them. The importance of the point in cases of the criminal administration of chloroform is apparent. The writer refers to the experience of Dr. Ouimsky who, in order to decide the question in a medico-legal case, made several experiments and found that with care a person could be successfully chloroformed without being awakened by the drug.

THE TEACHING OF THE HISTORY OF MEDICINE.

IN the *British Medical Journal* for July 12th, Osler describes the method followed at Johns Hopkins in the teaching of History of Medicine. The course of lectures is not compulsory and is given by Dr. Billings. There is an Historical Club, meeting monthly, which discusses various

epochs in the advance of the science, while in clinical teaching, where occasion offers, reference is made to the names of famous workers and leading questions asked.

LACHNANTHES TINCTORIA.

THE LANCET for July 12th has the reports of Drs.Spitta and Latham on the chemical and therapeutic properties of the herb 'Lachnanthes Tinctoria' which has been vaunted as a prophytactic and cure for tuberculosis. They conclude that lachnanthes consists largely of a resinous substance or substances and some body which is precipitated by lead subacetate and is soluble in water. Five c.c.m. of an aqueous solution of the alcoholic extract is powerful enough to kill guinea pigs, while doses varying from one to three c.c.m. do not exert any inhibitory action on the progress of tuberculosis, but rather seem to hasten it.

KEEPING WELL.

MEDICINE July 1902 has a thoughtful editorial on the importance of individual preventive medicine. It is pointed out that we wrong the profession when we let the idea become fixed that our care is on'y intended to cure or palliate serious affections, or relieve distressing symptoms. A thorough physical examination with all the aid that physiology can give, repeated say at six month intervals, particularly in those over forty, would reveal those insignificant prodromes that herald the approach of serious affections, and the correction at this time of errors in habit and diet might mean the addition of years to useful lives.

THE OCCURRENCE OF CANCER AND TUBERCULOSIS IN THE SAME ORGAN OR TISSUE.

IN the *Journal of Medical Research* for June, Moak examines the evidence with regard to the supposed antagonism of Cancer and Tuberculosis and reports five cases of their occurring coincidently in the same organ or tissue. He believes that there is no antagonism but that the reason they are so infrequently found associated is that 82 1-5 per cent. of tuberculosis is fatal before 50 while 73 2-5 per cent. of deaths from cancer occur after that age. But we must consider, too, the cases of latent or healed tuberculosis, and Nægel's statistics show that 92 per cent. of adults over 18 have either active, latent or healed tuberculosis, it follows that many of the cancer cases must occur among these. It is to

be noted, too, that the organs most frequently attacked by tuberculosis are not those most frequently affected by Carcinoma.

AN APPARATUS FOR USE IN PROLONGED NITROUS OXIDE ANÆSTHESIA.

IN the *Lancet* for June 28th, Hilliard describes an apparatus for the prolonged administration of Nitrous Oxide. Operations which require a period of anæsthesia, extending beyond one to two minutes, especially those in the region of the mouth make the use of the ordinary face-piece inconvenient or impossible; the writer obviates this difficulty by using in addition a tube in the form of a No. 7 to 9 gum elastic catheter, 6 inches in length, ending à boule. As soon as anæsthesia is completed by the ordinary method this is passed through the nostril, till it impinges on the posterior pharyngeal wall, and the gas is turned on in it. By this means anæsthesia may be prolonged as long as seven minutes, giving time for any ordinary dental operation, and interfering in no way with the operator. In 300 cases the writer has found no difficulty from bleeding or nasal obstruction, even the presence of adenoids being no contra-indication, and only in one case was difficulty experienced in keeping the patient under. The best position for the patient is sitting up, and if the operation is to be extensive, abstention from food for some hours before is advised.

BARTHOLINITIS.

UNDER this title, M. Julien discusses inflammation of Bartholin's glands in the *Gazette des Hopetaux*, June 26th. The infection is most frequently gonococcus and is associated with the other most common pus-producing organisms. The infection may be direct when it is derived from the male organ, the possibility of this is proven by the existence of this inflammation, without affection of neighboring parts; or indirect, where it is derived from the vaginal or urethral secretions. It may be acute or chronic. The acute form differs in no way from an ordinary abscess, surgical interference is advisable to prevent an unsuitable opening.

The chronic form is more troublesome, it may not be noticed or diagnosed without examination of the gland, when it will be found enlarged and somewhat firm, pressure may cause the expression of a drop of a discharge purulent or muco purulent in which—rarely—the gonococcus may be found. The opening in the chronic form is found through the duct of the gland and cath-teization and injection of antiseptic

solution—the author uses a concentrated solution of resorcin—may effect a cure. Total ablation of the gland is reserved for special cases, and requires a general anæsthetic.

MASSAGE OF THE BREASTS DURING LACTATION.

IN the *American Journal of Obstetrics* for June this subject is discussed by C. S. Bacon, and the statement is made that, both in theory as described and illustrated in the best known text books, and in practice by masseurs and physicians, the ordinary method is wrong and is handled on a wrong principle. The "caking," or hardening, of the breast is not due to the curdling of the milk. This never takes place within the milk-tubes, nor yet to the presence of milk, for as a rule no milk is formed, according to the writer, until nursing begins, or if any but a very small amount The hardening of the gland is due to the congestion of the blood and lymph, and therefore massage should be directed to the removal of these, and therefore should be centrifugal in direction, and not aim to the removal of the milk by centripetal stroking. The blood supply of the gland is mainly derived from the subclavian and axillary arteries, the venous outflow and the lymph discharge is by corresponding channels and this is the anatomical basis for action. The massage should begin gently below the clavicle and in the axilla and gradually encroach more and more on the mammary region. By this method a hard and painful breast is rendered lax and comfortable without the discharge of any milk. The writer does not recommend the treatment where there is infection or true inflammation as in mastitis, in such conditions rest is indicated and nothing should be done which will tend to spread the infection.

PATENT FOODS.

THE LANCET, July 5th, 1902, has an article on this subject by Robt. Hutchison, Assistant Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond St. The experience and the position of the writer should give weight to his opinions, especially as we find them founded on common sense and careful investigation, but his conclusions can in no sense be comforting to the manufacturers of such articles, who in the lay press emphasize the wonderful nutritive properties of their preparations, until the practitioner who does not recommend them is considered guilty of almost criminal neglect. The cases in which such a food might be required are: (1) As a stimulant to appetite, (2) To obviate difficulty in chewing or swallowing, (3) When digestion is

impaired, (4) To increase the amount of any ingredient of food, (5) To replace a natural food. The last reason that might justify the existence of such foods would be cheapness, so the ideal artificial food would be the one which in a small bulk contained the maximum of nutritious qualities, which was pleasant and stimulating to the appetite, which was easily digested and cheap—but unfortunately none of these articles combine these qualities.

(1) As a stimulant to the appetite, meat extractives are successful but are the only substances that will replace skilful cooking in this respect.

(2) As to difficulty of swallowing, no food can be more easily swallowed than a liquid, *e.g.*, milk—and if the patient cannot swallow fluid he certainly cannot swallow an artificial food. Then as to compactness, there is no food giving a large amount of nutriment in a very small bulk ; meat, which contains 20 per cent. proteid and 80 per cent. water, may be reduced to almost pure proteid by driving off the water; while sugar and butter are each the very high concentrations of carbohydrates and fat respectively—and as one cannot swallow a preparation from which all water has been drawn off without adding more water or other fluid, the advantage of such a preparation is not very apparent.

As for digestibility, the writer believes that the cases are rare in which pre-digestion of food is necessary : for, even where the stomach has lost its power, other parts of the intestinal system are able and ready to take up the duty.

Our knowledge of the fourth head, that of the advantage of increasing any particular constituent of diet is so limited, except in a few instances, *e.g.*, diabetes, that even if the patent foods offered us a means of doing so they would not be of great value.

To replace natural foods the most conspicuous example is that of infant foods, and this is the form in which artificial foods are most frequently prescribed. The writer divides these into three groups: (a) Those intended to be complete substitutes for human milk, *e.g*, Allenbury's, Horlick's Malted Milk, Carnrick's Soluble Food and Nestlé's Food. These are all desiccated milks with some addition, infants can be reared upon them but they are generally lacking in fat, and after the first few months the addition of some fruit juice is necessary to prevent scurvy. But the chief objection is the great cost.

The second class are the malted and starchy foods. An infant under six months cannot make use of starch, so in these it is supposed to be altered to dextrine. Mellin's food contains no starch and may be a useful addition to milk. Other kinds—those in which the starch is con-

verted during mixing are untrustworthy as careless preparation may render them valueless or harmful.

The third class, starchy foods, cannot be used for children under six months, but after that time flour, oatmeal and other cereals can just as well be used.

The use of patent foods can never be justified on the score of cheapness—the writer pointing out that, by spending one shilling on Valentine's Meat Juice, you get 6 units of energy; in somatose 16½, in meat 511, eggs 1065, in milk 3440, and in sugar 5000. Of course there are people who believe they must have these extraordinary foods, and they may have them.

As to particular classes of foods the writer has some interesting remarks. The proteid foods derived from meat may be useful in forcing nutrition. Those derived from milk by the separation and rendering soluble of the casein are valuable as containing no nuclein products, and so being available in cases with uric acid diathesis. Among these are Nutrose, Eucasin, Protene, Plasmon and Casumen. They offer a means of increasing the nutritive value of ordinary foods and as they are derived from skim-milk are not very expensive. Tropon is derived from mixed vegetable and animal sources, is cheap as derived from waste materials, but is not really soluble and has a sandy taste.

The group of foods intended to supply carbohydrates include the malt extracts. The real value of a malt extract is in the diastase it should contain which would assist in the transformation of further starch into sugar, but such a malt extract is very expensive as it has to be produced so carefully. Ordinary malt extracts have no value except for the converted sugar they contain, and honey at one-fourth the price contains much more.

Cod Liver Oil emulsion contains no more fat than cream nor is it more palatable or easily digested. Petroleum emulsion can have no value except as a lubricant—it is a hydro-carbon, not a fat, and cannot be absorbed but can all be regained from the excreta. "Pancreatic emulsion" is emulsified lard flavored with clove oil.

The beef extracts require some attention. The extracts as such are only useful for increasing appetite; they contain no proteid—merely extractives and mineral matters and their place is in the kitchen.

Another class contains in addition, meat fibre, and of these the best known is Bovril. A teaspoon of Bovril contains about as much food as 8 grammes of lean meat, but one cannot take a great quantity of Bovril without producing thirst and diarrhœa owing to the disproportionate quantity of extractives and mineral matters it contains. The prepara-

tions called beef juices contain the uncoagulated proteid of meat and most of them give the spectrum of haemoglobin, but 'Puro,' for example, is made up by the addition of egg albumen, while 'Bovinine' proves to be blood preserved in glycerine.

Among peptonized foods, or those containing albumose, a good one is somatose, containing 80 per cent. of soluble proteids. But none of these preparations can be given in amounts sufficient to be beneficial without the danger of causing diarrhœa.

Of course all these articles have a psychological value due to the faith the patient places in them that may be a reason for their choice in given cases.

TRAUMATIC PTOSIS.

TRAUMATIC Ptosis, unassociated with other lesions, is a rare condition, Terrien discusses a case in "Le Progrés Médical," with an examination of possible causes of Traumatic Ptosis.

1. Where it exists alone:
   - (*a*) From frontal contusion with sub-muscular haemorrhage.
   - (*b*) Direct contusion of the lid, without wounding, causing severance, or destruction of the motor nerve-endings.
   - (*c*) Wounding, with destruction of the muscular fibres.
2. Where associated with other paralyses:
   - (*a*) Intra-orbital haemorrhage, with ex-opthalmia, sub-conjunctival haemorrhage, and acute-motor paralysis.
   - (*b*) Fractures of the orbit. The symptoms are not definite:—ex-opthalmia, haemorrhage—sub-conjunctinal and from the nose, acute-motor paralyses, etc.
   - (*c*) Injuries in the region of the cavernous sinus. Cirotid injury with arteno-venous aneurism, etc.

TRAUMATIC AFFECTION OF THE TERMINAL CONE OF THE SPINAL CORD.

THE rarity of cases, in which an injury limited to the terminal cone of the spinal cord, can be studied makes the report in the "Gazette des Hoptaux," July 17th, by Raymond and Cestan, of the 'Salpêtrière,' of more than ordinary interest.

A man of 46 years, in 1895, fell about 30 feet, sustaining an injury to the lower part of the back, resulting in unconsciousness for a short time. There was found pain in the sacro-lumbar region, a superficial bruise, slight paresis of the legs, anaesthesia of the sphincters and

urethra, retention of urine and faeces, with involuntary passages. The motor incapacity gradually became less, and the muscular and tendinous reflexes became normal, but the symptoms of anaethesia of the mucous membranes, and loss of control of the sphincters remained, also an area of hyperaesthesia, embracing the perineal and scrotal regions.

The autopsy revealed only an atrophy of the sacral roots, and of the terminal cone, which looked as if it had been the site of an old myelitis. The extent of the injury was downwards from the attachment of the roots of the third sacral.

MELANOSIS OF THE LABIUM.

PIOLLET, Gazette des Hopitaux, reports a case, in the Hospital at Lyons, of a very rare condition, viz:—a melanotic tumor of the labium minus. It had been removed two years before, after a growth of five years, and had again reached the size of the end of the little finger. It was not painful, but caused some annoyance. Histological examination revealed a melanotic tumor, apparently developed from the endothelium of the blood vessels. The appearance was not entirely distinctive of either sarcoma or carcinoma. Eleven cases are mentioned from the literature on the subject.

THE TRANSPLANTATION OF TUMORS.

IN the June number of the *Journal of Medical Research*, Prof. Leo Loeb of Chicago, gives the results of investigations pursued in the transplantation of tumors into rats. Two series of cases are described, the most important being a series of transplantations of the sarcomatous part of a mixed adenocarcinoma—sarcoma of the thyroid. The reasons for concluding that the growth was a sarcoma and not a granuloma are as follows—the structure was that of a spindle-celled sarcoma with a tendency to form cuboidal or polygonal cells—a polymorphism frequently found in sarcoma. Two of these sarcomata showed a characteristic cyst formation with gelatinous contents. The growth was indefinite, and showed a large number of mitoses, multiple recurrences were observed and various metastases occurred. Small round cells were quite frequently present especially at the progressing margin of the tumor as is common in true tumors.

The sarcomata formed in different rats showed some structural differences based on differences in the cells in the formation of the fibres, and in the degeneration processes which took place. These differences

were constant although the sarcomata originated in the connective tissue of the same part of the body, they were reproduced throughout both series of transplantations, which were carried through forty and eight generations respectively. Certain factors in the constitution of these tumors were constant and others variable, but nutritive and functional as well as genetic influences may have brought this about. Investigation shows that many peripheral sarcoma cells remain alive in the first few days after transplantation and that they mix with the growing connective tissue of the neighborhood. It is very probable that these peripheral sarcoma cells give rise to the tumors after transplantation. Generally the central part of the transplanted piece becomes necrotic and liquified, but the sarcoma cells have power to grow into this part and replace it. All attempts to produce tumors either by transplantation or injection of tumor-fluid in other animals *e. g.* mice, guinea-pigs, and rabbits were unsuccessful. Pieces of tumor frequently gave rise to growth notwithstanding infection which would seem to show that the actively growing tumor cells seemed to possess considerable power of resistance to bacterial toxins. Negative results were obtained from injection of the cystic fluid and from fluid obtained by mincing the tumor with normal saline solution, so that further experiments made with the juice filtered in various ways, indicate nothing as to the character of the tumor-producing agency by their failure. The presence of various complicating factors prevent the experiments throwing light on the question of individual immunity.

Local metastases and contact metastases were formed in the second series of transplantations and secondary nodules were frequently found; the growth of the original tumor was slower than that of the transplanted pieces. By experiment it was found that the tumor-producing agency was not destroyed or even markedly attenuated by keeping the pieces on ice for as long as five days, nor were they markedly affected by exposure to Röntgen rays.

In experiments in the transplantation of an adenoma of the mammary gland, it was found that when pieces were transplanted into the same animal they remained alive *in toto*, and underwent the same series of changes, as the part of the tumor left in its original site, while parts transplanted into other rats became almost entirely necrotic. In the first class pregnancy caused a large increase in the size of the tumor.

On the whole these interesting experiments show the possibility of the transplantation of sarcomata in the rat. they furnish an argument against the theory that the tumor-producing agency in such malignant

growths is a micro-organism, and they add to the knowledge of the physical qualities of this agency without isolating it.

Following Prof. Loeb's article is a preliminary report on Tumor Inoculation by Prof. Herzog. The same tumors were used as in Prof. Loeb's experiments. Pieces of non-infected tumors were maserated with normal saline solution, under aseptic precautions. This was filtered through a pasteur filter, cultures were grown to show that the filtrate was free from known micro-organisms and injections made into the abdominal cavities of rats but without result. As there is a possibility that the pasteur filter may exclude a micro-organism that occupies a casual relation, a further series of experiments was made in which collodion sacs filled with clear fluid from tumors were implanted intra peritoneally either in contact with a transplanted tumor or in one already growing. After remaining for a variable time in this position the sacs were removed and the contents removed under aseptic precautions. Part was used for inoculation of cultures, part injected into animals, but the results in both cases were negative. Attempts were also made to use living yeast cells as a culture medium for a possible micro-organism in case that it would grow only in a parasitic method, but these too were negative in result.

On the whole the experiments seem to point to the conclusion that the tumor producing agency is not a micro-organism.

SIR FREDERICK TREVES.

WE quote the following from the *London Practitioner* of August: "The whole Empire owes a debt of gratitude to Sir Frederick Treves, whose soundness of judgment, strength of character, and pre-eminent skill were the means of saving an almost hopeless situation. We do not pretend, like so many irresponsible scribblers of the general press, to have been behind the scenes, or rather the doors of Buckingham Palace. But it is no secret that Sir Frederick Treves had many difficulties to meet besides those naturally arising from the surgical problem with which he was called upon to deal. A strong man was needed, and fortunately for the King and for the Nation, a strong man was at hand. We venture to offer to Sir Frederick Treves the humble tribute of our admiration of the great qualities which he has displayed in circumstances that might have disabled the judgment and paralysed the nerve of most men, however confident in themselves. We are sure that in saying this we are expressing the feeling of the profession which is proud to have such a man among its members."

DR. WALTER B. GEIKIE, was born in Edinburgh, Scotland. He came to Canada when quite young. His father was Rev. Archibald Geikie, for some years a minister in Toronto. His brothers are Rev. Cunningham Geikie of Bournemouth, England, and the late Rev. Archibald Geikie of Bathurst, Australia. Dr. Geikie began the study of medicine, while a very young man, in the late Hon. Dr. John Rolph's School—thence going to Jefferson Medical College, Philadelphia, from which Institution he took a Degree. Returning to Canada he began general practice and was for many years associated with Dr. Rolph, as a teacher, in the old Victoria Medical School. After being for some years engaged in active practice, Dr. Geikie visited the Old Land, taking the Degrees of F.R.C.S. Edinburgh, and L.R.C.P. London The Degree of D.C.L. was conferred on him in 1889 by Trinity University. In the spring of 1871, when Trinity Medical College was re-established, with the late Dr. Hodder as Dean, Dr. Geikie was appointed to the Chair of Practice of Medicine, which he has held ever since. On the death of Dr. Hodder—more than twenty years ago—he was appointed Dean of the Medical Faculty. For many years he was actively engaged on the staff of the Toronto General Hospital as clinical lecturer. He has also represented Trinity Medical College on the Ontario Medical Council for many years.

W. B GEIKIE, M.D., C.M., D C.L., F R C S ED., L.R.C.P. LON.
DEAN OF THE FACULTY, TRINITY MEDICAL COLLEGE, TORONTO.

W. H. Moorehouse, M.D., graduated in medicine at Trinity University in the year 1874, taking honors in all the branches. He spent the following year in London and Edinburgh, taking the diplomas L.R.C.S. and L.R.C.P. Edin. He obtained the degree of B.A., Western University, London, by examination in 1901. He was elected President of the Ontario Medical Association in the year 1890. He takes an active part

W H Moorehouse, B.A., Western, M.D., Trinity, L.R.C.P. and S., Edin.,
Dean of the Medical Faculty, Western University, London.

in the London Medical Association, of which he was President in 1892. He was elected Dean of the Medical Faculty, Western University, in May, 1891, which position he still holds. He was appointed in the year 1894 by the Senate of the Western University, as its representative on the Ontario Medical Council. He was elected by the Senate of the Western University as Vice-Chancellor in the year 1900.

FRANCIS WAYLAND CAMPBELL, M.D. was born in Montreal. He graduated at McGill University in 1860. In 1872 he assisted in forming the Medical Faculty of Bishops College, acting as its first registrar for ten years, when he became the Professor of Physiology, and, subsequently Dean of the faculty, which he still holds, with the professorship of Clinical Medicine. For ten years, he was secretary of the College of Physicians and Surgeons of Quebec ; and is now physician to the Montreal General Hospital, and the Western Hospital. In 1860, he was gazetted assistant

F. W. CAMPBELL, M.D , D.C.L.,
DEAN OF THE MEDICAL FACULTY IN MONTREAL OF BISHOP'S COLLEGE, LENNOXVILLE.

surgeon to the first Batallion, Prince of Wales Rifles, surgeon in 1866, and, in 1883, Surgeon Major to the Canadian Infantry, stationed at St. Johns, Q. He was in active service, with the Prince of Wales Rifles, during the Fenian Raids of 1866 and 1870. From 1864 to 1872, he was one of the editors of the Canadian Medical Journal, when he established the Canadian Medical Record, of which he remained editor for seventeen years. In 1895 he received the honorary degree of D. C. L. from Bishops College, Lennoxville.

Thomas George Roddick, M.D., was born at Harbour Grace, Nfld. He was educated at the Model and Normal Schools, N.S., and graduated at McGill University in 1868, taking the Holmes gold medal. After graduating he was assistant house surgeon at the Montreal General Hospital for six years. In 1872 he became lecturer in Hygiene in the McGill Medical Faculty, and subsequently demonstrator in Anatomy, Professor of Clinical Surgery, and Professor of Surgery, which latter chair he still holds. He has been connected with various medical corps

T. G. Roddick, M.D., M.P.,
Dean of the Medical Faculty McGill University, Montreal.

in the city of Montreal, and wears the general service medal for the Fenian raid of 1870, and he also received the medal for the Northwest rebellion of 1885. In 1896 he was elected President of the British Medical Society, being the first colonial to hold this office. He was elected to the Dominion Parliament in 1896, and re-elected in 1901. On the retirement of Dr. Craik (1901) he was appointed Dean of the Medical Faculty of McGill University. He was mainly instrumental in carrying through the Houses of Parliament the Dominion Registration Bill

Dr. Fife Fowler was born in 1823 at Elgin, Morayshire, Scotland. He attended lectures at King's College, Aberdeen. He was apprenticed to the late Prof. Pirie, and graduated from Mareschal College in 1843 as M.B., and three years later as M.D. He took his L.R.C.P. Edin. in the same year. In 1854 he came to Canada, locating in Kingston. He was invited to take the Chair of Materia Medica and Therapeutics in the Medical Faculty, then being formed, of Queen's. On the resignation of

FIFE FOWLER, M.D., ABERDEEN, L.R.C.S., EDIN.,
DEAN OF THE MEDICAL FACULTY, QUEEN'S UNIVERSITY, KINGSTON.

Dr. Yates he became Dean and Professor of Medicine in 1878. On his retirement from active teaching and hospital work the Faculty and graduates of Queen's endowed a scholarship, to be known as "The Dean Fowler Scholarship." Dr. Fowler now enjoys his well-merited leisure, and as Dean is held in the highest esteem by all his colleagues and present and past students. He lives in the full consciousness that his efforts have been fully appreciated.

George L. Sinclair, M.D., was born in Norfolk, Virginia, in 1850. He received his education at Dalhousie College and the College of Physicians and Surgeons, of New York, graduating in 1872. In 1876, he accepted the position of assistant medical superintendent of the Nova Scotia Hospital for the Insane, becoming superintendent in 1890. He took the deepest interest in the patients, and did much to bring that

GEORGE L. SINCLAIR, M.D.,
DEAN OF THE MEDICAL FACULTY, DALHOUSIE UNIVERSITY, HALIFAX, N.S.

institution up to its present efficient state. In 1898 he resigned to become Inspector of Hospitals, Asylums, etc., and is devoting himself to the improvement of jails and poorhouses throughout the province. He has been connected with the teaching staff of the Medical College for nearly twenty-five years. Formerly, he was Professor of Anatomy, but, more recently, he has been lecturing on mental and nervous disorders. In 1901, owing to the death of Dr. Edward Farrell, he was appointed Dean of the Medical Faculty of Dalhousie.

R. A. REEVE, M.D., is well known to the medical profession of Canada. For over thirty years he has been connected with the Toronto General Hospital in the departments of ophthalmology and otology. He was lecturer on these subjects in the Toronto School of Medicine for many years, and has been professor of the same subjects in the Medical Faculty of the University of Toronto since 1887. He has taken an active interest in various medical societies; and has filled the offices of President of the

R. A. REEVE, B.A., M.D., LL.D.,
DEAN OF THE MEDICAL FACULTY, UNIVERSITY OF TORONTO.

Toronto Medical Society, the Toronto Pathological Society, and the Ontario Medical Association. A few years ago he was made Dean of the Medical Faculty of the University of Toronto, a position which he still holds. This year the University of Toronto conferred on him the degree of LL.D., *honoris causa*, on account of his valuable services to the cause of medical education.

R. Barrington Nevitt, M.D., has been in practice in Toronto for some twenty-eight years. He has been actively identified with a number of medical societies ; and is a past president of Toronto Medical Society. He graduated from Trinity University in 1872, taking the degrees of M.D., CM. He is one of the surgeons on the staffs of the Toronto General Hospital, St. Michael's Hospital, and the Victoria Hospital for Sick

R. B. Nevitt, M.D., C.M ,
Dean of the Ontario Medical College for Women.

Children. He took an active part in the organization of the Ontario Medical College for Women, acting at first as secretary. In 1888, on the death of Dr. Barrett, he was chosen as Dean of the Medical Staff, and lecturer on surgery, both of which positions he still holds. Under his guidance the Women's Medical College has made excellent progress, and is now one of the most useful of the many colleges in Ontario.

DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville,
Fellow of the British Laryngological Rhinological, and Otological Society.

THE LINGUAL TONSIL.

LEMERE in June *Medicine* has a very instructive article on the lymphoid tissue situated at the base of the tongue immediately in front of the epiglottis. This tissue is in reality situated in the glosso-epiglottic fossa and when projecting well out has been given the name of lingual tonsil. It is the lower segment of the tonsillar ring formed above by the pharyngeal and at the sides by the faucial tonsils. Hypertrophy of this tissue probably begins about puberty, but the symptoms due to its presence do not as a rule show themselves until adolescence. It is essentially a trouble of neurasthenics and women. The symptoms are usually vague and very difficult for the patient to locate. The most common complaint is a weariness of the throat and a feeling as if there was a lump in the throat. The voice becomes easily fatigued and frequently gives out; various degrees of laryngitis with or without pain are not infrequent. In fact the symptoms may, as in refractive errors, be entirely out of all proportion to the magnitude of the organic lesion. Lemere thinks the term Globus Hystericus, which in reality is merely a psychic phenomenon, is in the majority of cases used through ignorance of what is the real trouble.

The galvano cautery, or, if the mass project sufficiently, the guillotine is used to remove the hypertrophy. Occasionally the hot or cold snare may be of service. If suppuration be present, incision gives speedy relief. The writer cannot agree with the remarks made on the treatment of mycosis found in this region and also thinks that the lingual varix, which is very often found in these cases, may be an indication for systemic treatment either alone or associated with operative measures on the same principal as haemorroids are treated. Regarding mycosis it must not be forgotten that two germs occur, one in which there is simply a catarrhal state of the crypts, while the other consists of a horny hypertrophy of the lining epithelium—keratosis The former may, according to Sir Felix Semon be ignored, while Wingraves investigations leads one to treat the latter as he would an ordinary corn with Salicylic acid and Alcohol The galvano cautery so generally recommended is very rarely successful in curing the disease.

LIGATION OF THE CANALICULI IN ACUTE SUPPURATION OF THE CORNEA.

THE March number of the *Montreal Medical Journal* contains an article by Dr. Bullar who deals with Corneal infections and cataract extractions in cases where there is a purulent condition of the tear sac. All opthalmogists are agreed as to their inability to satisfactorily cope with corneal suppuration in the presence of dacryocystitis, and none would dare perform any operation involving an opening of the eye ball in such cases. It is a very difficult matter in most cases to get a chronic dacryocystitis cured and the danger of such cases is the almost certainty of purulent Keratitis following even slight corneal abrasions. Bullar in one case passed an iron dyed silk ligature around the canaliculi, thereby shutting off the supply of infection, and rapidly controlled the suppuration process on the cornea. He was induced to do this by losing a case of cataract extraction from suppuration following an operation in a case where the puncta lacrymalia appeared somewhat unhealthy. The other eye was in a similar condition but the operation was succesfully performed after ligating the canaliculi. There appears to be no difficulty in opening the canaliculi when they have been ligated two weeks nor does their temporary closure lead to disturbances from increased accumulation in the tear sac.

EYE DEFECTS WHICH MAY CAUSE MENTAL DULNESS IN CHILDREN.

C. S. BULL, in *Pediatrics*, remarks that *Hypermetropia* gives rise to ocular pain, headache and a sense of fatigue in the brain, symptoms incident to weakness of the power of convergence. In many cases the correction of the refractive error will give very good results. It is absolutely useless to attempt to do this without a mydriatic. *Astigmatism* is productive of indistinct vision for both distant and near objects, and may be an etiological factor in the production of various neuroses, and even of epileptiform attacks in susceptible individuals. Gould, of Philadelphia, has recently cited some very remarkable cases in which the correction of evena very small degree of hypermetropia or H. astigmatism, resulted in a complete cessation of epilitiform seizures. The patients were all adults and had been considered epiliptics for many years.

Myopia is very frequently responsible for a child's supposed mental dulness. The constant, though ineffectual, effort to see, as his playmates do, causes an apparent backwardness in the child's intellectual development. He frequently shuns his companions, preferring to be by himself.

Correction of his myopic error allows him to see the world as his playmates do, and the mental dulness vanishes. Myopia, however, is a disease, and does not simply require concave glasses to complete the treatment. The general health should be carefully watched. The size of the school desk, and the direction from which the light falls on the student's book, are important elements to be considered. Moreover, it has been found that the more educated a country becomes, the more myopic its people are.

THE DANGERS OF MIDDLE EAR SUPPURATION.

THE risk a person runs when he goes about with an untreated discharge from the ear is probably not sufficiently recognized by the family physician. Wilde very aptly says: "*When a discharge from the ear exists, we can never tell how, when, or where it will end, or to what it may lead.*" E. E. Clark, in the *Medical Standard*, makes some very pointed remarks. He says:—"The tympanic cavity is a death trap which catches far more people than many of us suppose. In the entire human economy, there is not a single cavity which is of such vital, relative importance to its neighboring structures, as that of the middle ear. It bears such important relationship to all which lie about, hidden away, as it is, deep down in the firmest and hardest bone in the body that, when diseased, it may be as a slumbering volcano, or a quick and violent active earthquake. Next to trauma, ear disease is most often responsible for brain infection and abscess. Every case of suppuration of the middle ear should be regarded as a serious disease." McEwen's well known remark may be quoted, that he would sooner have a charge of dynamite in his ear, than a drop of pus in his mastoid antrum. MacLeod Yearsley, in the July issues of the *Medical Times* and *Hospital Gazette*, has two very instructive papers on chronic suppuration of the middle ear, and the lessons to be learned from them. The relationship between adenoids and suppuration in the tympanum is very forcibly shown, and the importance of removing adenoid masses, either in adults or children, in order to *cure* a suppurating ear is insisted upon very strongly. The papers showed how much could be done for those suffering from chronic discharge from the middle ear, and to what serious consequences neglect may lead. Taken in time, simple means may do a good deal, but treatment must not be used haphazard without careful and thorough examination. Half an hour, spent in making one's self acquainted with the actual conditions of things, will save much valuable time later.

Aurists frequently see patients with chronic suppurative middle ear catarrh, who have been given a glass syringe and some watery lotion to

syringe into the ear, and some boracic acid powder to blow in afterwards. Should there happen to be a cholesteatomatous mass in the tympanum, a few drops of water will probably be all that is necessary to bring on acute mastoiditis, sinus thrombosis, or brain abscess. The boracic acid which is insoluble in pus, simply cakes up and obstructs the outflow, besides it has very little antiseptic action, As a matter of fact, patients are not even able to properly syringe their own ears. A large aural polypus is a very inviting thing to one who happens to have a snare close at hand; yet one should not imagine it a trivial operation. That polypus may be the barrier between the pus and the meninges. The reviewer once saw a famous London Aurist remove a large aural polypus, and learned of the patient's death four days later from meningitis. The propriety of removing aural polypi from the external auditory canal is a debatable point, many preferring to attack the polypus from behind, and, at the same time, cleaning out the accompanying disease in the antrum auditus and attic.

CATARRHAL INFLAMMATION OF MIDDLE EAR CAUSING FACIAL PALSY.

REIK, of Johns Hopkins, quoted by the Journal A.M.A., suggests that in a considerable number of cases of facial paralysis there exists an acute, or sub-acute, inflammation of the middle ear, as an intermediary condition between the exposure to cold and the appearance of the paresis. He reasons that, inasmuch as the sheath of the nerve is not uncommonly in direct contact with the mucous membrane of the middle ear, or separated from it by a very thin lamella of bone, the nerve may suffer in consequence of a catarrhal condition of the ear resulting from exposure to cold, and he suggests that, in some cases of facial palsy, symptoms of coryza and pharyngitis, followed by a pricking or stinging in the ear, with a sense of fullness, tinnitus, or deafness, will, if looked for, be observed in advance of the muscular weakness. It is advised, in addition to leeching, counter-irritation, purgatives, salicylates, and iodides, that, if there be any indication of exudation in the tympanum, paracentesis should be preformed.

The reviewer has, at present, a patient whose facial paralysis followed a cold two days previously, and with which was associated considerable aural mischief. The urine contained 2 per cent. (bulk) of albumen, and granular casts. There was a dull earache of twenty-four hours' duration, when there was noticed a peculiar feeling on the same side of the face. At this time, there was no noticable paresis, but next morning complete facial paralysis was present. The aural trouble was soon well, but the facial paralysis has persisted now for over eight weeks. Paracentesis

was not preformed, as there was no exudate present, and the Eustachian tube was patent. Medicinal treatment, together with galvanism, has been persistently tried, but so far with no effect In this case there was also loss of tas'e on the anterior half of the tongue which localized the facial lesion, as being situated between the geniculate ganglion and the chorda tympani nerve.

ACUTE CONGESTIVE OR INFLAMMATORY GLANCOMA.

CHAS. KIPPS, in the June journal of the A.M.A., has a very excellent article on acute glancoma. Kipp was recently asked to see a lady who was nearly blind. The loss of vision had followed an apparent attack of biliousness a few days previously. The eye ball was prominent, eye lids swollen, V=flame of candle at a few feet, cornea cloudy and somewhat less sensitive than normal, anterior chamber shallow, iris swollen, pupil dilated, and tension plus. There had been, for two days, almost incessant vomiting, and great pain in the left side of the head, teeth, and eye. An iridectomy was immediately advised, and, while preparing for the operation, $\frac{1}{2}\%$ sol. of eserine was instilled. The operation was preformed under ether, and was not followed by further pain or vomiting, the patient ultimately regaining her former visual acuity. The above notes from an accurate picture of a *severe attack* of acute glancoma, which is usually first seen by the family physician. The attack not infrequently comes on about midnight, and is associated with marked gastric disturbance, masking very effectually the real seat of the disease, and when the case is seen by the opthalmic surgeon, very little information may be gained. In fact, there may be only a slight redness of the eye, which is too often ascribed to cold. When this is associated with a semi-dilated pupil, in a person who has been using nothing in his eyes, the case demands careful examination. Dilation and immobility of pupil are found in no other acute inflammatory eye diease. Even here it is not developed until other symptoms of inflammation have been present for some time.

The causes leading up to an attack, in people predisposed to glancoma, are various:—such as an attack of indigestion, gastric symptoms being most prominent and are very misleading, over use of the eyes, emotional disturbances, and, what is of greatest importance, the indiscriminate use of atropia in eye water.

The diagnosis is usually not difficult, the main symptoms being (1) gradual failure of eye sight, necessitating frequent increase of presbyopic lenses, (2) colored ring around the lamp or gas flame, (3) diminished sensitiveness of the cornea, (4) increased intra-ocular tension, (5) shallow

anterior chamber, (6) semi-dilated pupil, (7) cupping of the optic disk. These symptoms are usually present, in part at any rate, previous to the acute attack. In fact, Kipp thinks cloudiness of vision and a halo around the light, sufficient grounds on which to preform an iridectomy, as they constitute the first stage of acute glancoma. Age exerts considerable influence, the disease being rare under 35, and most common over 50, women being more liable than men.

A very full account of the pathology and views of various writers on the pathological condition, causing the increase of tension, is given. He says: "A typical acute glancoma is an inflammatory disease in the same sense that a strangulated hernia is so, but not otherwise, it exhibits an acute obstruction of the circulation, which can be cut short by the removal of the pressure, but in no other way.

Treatment. A good rule is given, viz.:—Not to use atropine, or other mydriatic, for an inflammation of the eye, especially in elderly people, till you have assured yourself that the pupil is smaller than normal, and that the tension of the eye is not increased. The opthalmoscope may give very valuable information, as the presence of cupping, not the physiological excavtion, will put one on his guard. When acute glaucoma has been diagnosed, eserine salicylate, $\frac{1}{4}$ or $\frac{1}{2}$% sol., should be instilled in the eye, and repeated at short intervals, until an iridectomy can be preformed. If eserine causes increased pain, a 4 % sol. of pilocarpine may be tried. Cocaine, 3 or 4%, may also be of use to control the patient's suffering, as well as morphia. Soda salicylate, in 20 grs. doses, with massage of the cornea may give great relief. While myotics may overcome the temporary and present attack, one should not persist in their use at the expense of operative measures. An iridectomy gives better results when it is performed. It is a well known fact that, soon after an iridectomy in acute glaucoma, the other eye frequently has a similar attack. Hence Kipp instils eserine in the sound eye, before operating. Although months and even years may elapse before the second eye is attacked, it very seldom escapes entirely. This has led Germans, and especially Czermack, to advocate a prophylatic iridectomy.

NASAL DYSMENORRHŒA.

DR. F. LINDER (*Münchener medicinische Wochenschrift*, June 3, 1902) says that theoretically there is still much to be explained before one can understand the action of c ocainization of the genital tubercles in the nose in reducing or eliminating the pain of dysmenorrhœa as recommended by Fliess. Practically, however, the method is satisfactory in the vast majority of cases, aud it is striking how rapid the remedy sometimes acts and for how many hours it persists.

MEDICAL SOCIETIES.

CANADA MEDICAL ASSOCIATION.

Montreal meeting, September 16th, 17th and 18th, 1902.

PROVISIONAL PROGRAMME.

The general meetings and evening addresses will be held in No. 111 Lecture Room, Medical Faculty, McGill University. The sections will meet in other lecture rooms of the same building.

FIRST DAY.

9.30 a.m.—General Meeting, Proposal of Members, Notices of Motions, etc, Striking of Committees; 10.30 a.m., Meetings of Sections.

Surgical Section.—Paper by A. Primrose, Toronto—Filariasis Cured by Operation.

Paper by Dr. Perry Goldsmith, Belleville—Hæmorrhage in Removal of Adenoids and Tonsils.

Paper by H. D. Hamilton, Montreal—Complete Occulsion of Posterior Naris.

Paper by Dr. Casey A. Wood, Chicago—Empyema of Frontal Sinus.

Medical Section.—Paper by John Hunter, Toronto—Pleurisy as Associated with Tuberculosis.

Paper by A. E. Orr, Montreal, on Blood Pressure.

Paper by G. A. Charlton, Montreal—Anæmia Due to Toxines.

Paper by Dr. J. R. Clouston, Huntingdon—The Country Doctor of To-day.

2 p.m.—General meeting—Proposal of members, etc., followed at 3 p.m. by address in Surgery by John Stewart, of Halifax, N.S.; 5 p.m., garden party at the residence of Mr. James Ross, Peel Street; 8.15 p.m., President's address, followed by lantern demonstration on the Exanthemata by Dr. Corlett, of Cleveland, Ohio.

SECOND DAY.

8 a.m.—Exhibition of cases at the different hospitals: Montreal General Hospital, surgical cases; Royal Victoria Hospital, medical cases; Hotel Dieu, medical cases; Notre Dame Hospital, surgical cases; 9.30 a.m., general meeting, followed by a discussion on "Diseases of the Gall, Bladder and Bile Ducts." (*a*) Medical diagnosis, introduced by Dr. A. McPhedran, Toronto; (*b*) Medical treatment, introduced by Dr. A. D. Blackader, Montreal; (*c*) Surgical diagnosis, introduced by Dr. James

Bell, Montreal; (*d*) Surgical treatment, introduced by Dr. J. F. W. Ross, Toronto, followed by Dr. G. E. Armstrong, Montreal.

Medical Section.—2 p.m.—Paper by Dr. J. F. Macdonald, Hopewell, N.S., on Tuberculosis.

Paper by Drs. Starr and McKenzie, Toronto—Multiple Sarcoma.

Paper by Dr. Maude E. Abbott, Montreal—Methods of Classification in Medical Museums.

Paper by A. D. Shirres, Montreal—Degeneration of Spinal Cord in Anæmias, etc.

Surgical Section.—Paper by G. A. Peters, Toronto—A New Symptom of Intestinal Paralysis in Peritonitis.

Paper by Dr. Ferguson, Chicago—Removal of Prostate by Perineal Incision.

Paper by G. E. Armstrong, Montreal—Treatment of Prostatic Hypertrophy by Suprapubic Incision.

Paper by Dr. J. O. Orr, Toronto—Artificial Astigmatism.

Paper by Dr. Burnham, Toronto—Sympathetic Ophthalmia.

Papers by Dr. Monod, and Dr. A. E. Garrow, Montreal.

Obstetric and Gynecologic Section.—Paper by Dr. Robinson, Ottawa—Normal Labor.

Papers by Dr. Lapthorn Smith, Dr. Lockhart, and Dr. Chipman, Montreal.

8.15 p.m.—Address in Medicine by Dr. Wm. Osler, Baltimore, followed by reception in Engineering Building at 9 o'clock.

THIRD DAY.

8 a.m.—Exhibition of cases at the different hospitals: Montreal General Hospital, medical cases; Royal Victoria Hospital, surgical cases; Hotel Dieu, surgical cases; Notre Dame Hospital, medical cases. 9.30 a.m.—General meeting—Reception of reports from committees, general business. 10.30 a.m.—Paper by Dr. Robinson, New York—X-ray Treatment of Cancer.

Paper by Dr. Girdwood, Montreal—X-ray as Diagnostic and Curative.

Paper by W. F. Hamilton, Montreal—X-ray as Diagnostic Agent in Thoracic Diseases.

Paper by S. F. Wilson, Montreal, on the Use of High Potentials in X-ray Work.

The afternoon will be given over to an excursion by rail over Victoria Bridge and thence to Lachine (through the courtesy of the Grand Trunk Railway). From here the steamer "Duchess of York" will make

the trip up Lake St. Louis and run the Lachine rapids, arriving in the city about 5.30 p.m. (Lunch on board steamer.) At 8.30 a "smoker" will be given in the Victoria Rifles' Armoury, Cathcart Street.

THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

THIS association held its annual convention on 17th and 18th April last. His Excellency the Governor-General of Canada said:—"It was little more than a year since the first conference was held for the prevention of tuberculosis. It was attempted to create public interest in the question, and create an organization in Canada to cope with this great calamity. But proofs are coming to hand that its ravages are, at last, giving way before the knowledge of treatment and prevention which we owe to scientific research. The object of the association is to arouse public interest in the prevention of tuberculosis by collecting expert opinion and disseminating the same, in simple form, throughout the public. We do not desire to cause alarm, but rather to spread useful information on the subject of prevention. The nature of the work is not such as to make an appeal to the eye. It was rather work that required to be quietly done. It would be a mistake, at the present, to embark on the building of expensive sanatoria, and making appeals for a large subscription list for them. The day may come when the association will be able to intrust itself in sanatoria and health resorts. For the present, health matters rest largely with the Provinces. The labors of the association will be, therefore, in the circulation of literature dealing with tuberculosis, its cause, prevention, and cure."

Dr. Knapp, in reply to a vote of thanks, said:—"It is no trifling thing to work in the anti-tuberculosis crusade. It is not easy to convince people that they are doing wrong. They do not like to hear it. There is some indifference on the part of the rich to the tuberculosis movement. I often wish I could take some of our Rockfellers or Carnegies to the tenement districts of New York to show them a poor consumptive father slowly dying the lingering death of a consumptive, deprived not only of the comforts but the necessities of life, and then tell them that if he had gone into a sanatorium twelve months ago it would have cost about $500, and how easily either of them could have spared the sum. To your Excellency I desire to extend my thanks I have been treated most hospitably,—indeed, I have been treated royally."

The Committee on the Relations of Governments and municipalities towards tuberculosis reported as follows:—

In view of the facts that tuberculosis is a preventible and curable disease, that free from check its tendency is to increase in geometrical ratio, that at a moderate computation it has 30,000 to 40,000 subjects in the Dominion at the present time and is levying a yearly death toll of about 9,000 human lives or one in every 650 of our population, there is presented a situation that demands united, organized, and disciplined effort to arrest this terrible disease and to provide, as far as possible, for the care and cure of its victims.

Therefore consistently with the recognized duties, obligations, and responsibilities of governments and municipal bodies in relation to matters of public health, it is greatly to be desired that they should by legislation, regulation, and necessary financial aid endeavor, with the co-operation of charitable and philanthropic organizations and individuals, to promote efficient effort in dealing with the tuberculosis problem in all parts of the Dominion, and the Committee recommends:

1. That the Dominion Government may be solicited to make to this Association a grant of money to assist in the education of the public on the subject of tuberculosis through such means and agencies as the Council of the Association may from time to time determine.

2. That inasmuch as experience appears to show certain localities to possess favorable climatic and other advantages for the treatment of the disease, that as a consequence such localities become resorts for tuberculous patients coming from less favored and distant parts of the Dominion, and that to such extent an undue burthen is laid upon the local governments or municipal bodies which may be called upon to provide for the care and support of such unfortunates, a claim is established for the co-operation of the Federal Government by vote of public money or otherwise for the establishment and support of sanitoria, hospitals, or other institutions for the care of the tuberculized.

3. That Provincial aid should be sought to enable the Association to promote necessary and uniform legislation in all Provinces of the Dominion for dealing with the subject, and to encourage municipalities, philanthropic associations and individuals by grants, contributions, subscriptions, donations, bequests, etc., to establish, equip and maintain sanitoria for their own people suffering from the disease.

4. That municipalities may most effectually and practically aid in the work by the erection of suitable buildings and by the provision of a per diem allowance for maintaining in the institution such persons as their medical health officers may recommend.

5. Regarding the subject of legislation your Committe beg to observe that it falls under the heads of Federal, Provincial and Municipal.

Federal. Federal Legislation should provide for (1) financial assistance; (2) prevention and care of cases of tuberculosis; and (3) provide against the introduction of tuberculous immigrants.

Provincial. Provincial Legislation should provide for (1) notification to the health authorities of all cases of tuberculosis by physicians and householders; (2) adequate inspection of workshops, factories and schools to secure sanitary conditions favorable to the prevention of tuberculosis; (3) enabling and encouraging municipal action in establishing sanitoria with the support and under the general provision of Provincial Governments, and (4) controlling the production, inspection and sale of meat, milk and the products of milk.

Municipal. Municipal regulation through powers conferred by Provincial Governments should provide for (1) establishing municipal sanitoria; (2) systematic inspection of milk and meat and of cows and public dairies; (3) maintaining the cleanliness of public buildings and conveyances by the prevention of spitting and other nuisances; (4) giving assistance to advanced cases of disease by removal of patients to hospital or by dispensary aid in their homes; (5) immediate attention by medical health officers to the confidential reports of physicians attending cases of tuberculosis and filing all such reports for statistical purposes.

Your committee is further of opinion that as regards the work of medical inspection of schools it should include the examination of teachers respecting their freedom from tubercular disease and of the children as to evidences of chronic ill health, particularly as regards enlarged glands, cough and diseased bones and joints. After any prolonged illness a child should be required to bring on returning to school a certificate from the attending physician. Power to restrict attendance at school should be based upon positive evidence of contagion being obtained by the Medical Health Officer.

On the question of guarding against the spread of tuberculosis through food supplies your committee beg to recommend that the Dominion Government be asked to continue and increase the dissemination of information on the danger of the spread of tuberculosis by means of infected meat and milk, and that such information should especially refer to the need for keeping the cattle and byres supplying milk in a healthly and cleanly state. Municipal authorities should further extend their inspection to milk foods and their sources, and provide for periodical inspection of cattle and stables. All slaughter houses should be licensed only when constructed, drained and managed to the satisfaction of the Health Officer, and all meat sold within any municipality or prepared therein should be subject to inspection.

The committee on hospitals, sanatoria and public conveyances reported :—

1. That with the exercise of reasonable care pulmonary tuberculosis is non-contagious, and that consumptives may be treated in a general hospital without in any way being a source of danger to other patients ;

2. That many are unable to be cared for outside a general hospital ;

3. That the function of a general hospital is to care for all classes not afflicted with dangerously contagious disease ;

This Association urges :—

That all general hospitals receiving public aid should make provision for a due proportion of tuberculosis cases. By refusing such cases the general hospitals increase the fear already too prevalent amongst the the people and which tends to make the consumptive an outcast.

That the provision of sanatoria is an indispensable part of measures for the diminution of tuberculosis.

Seaside charitable establishments, holiday colonies for the poor, anti-tuberculous dispensaries and kitchens are also recommended.

That railways and steamship companies should provide for tuberculous invalids specially constructed compartments, which will admit of ready disinfection.

Spitting in railway carriages, street cars and in public places being such a menace to the health of the public, this Association urges that each municipality penalize this offence, and appoint a special officer to see that the anti-spitting regulations are strictly enforced.

The committee on the publication of information recommended that the Dominion government be asked for an annual grant for educational purposes ; that a central office be organized at Ottawa ; that a library on tuberculosis be established ; that an effort be made to collect statistics from all over the Dominion ; that suitable reading matter be prepared for distribution, and that, as soon as possible, a quarterly bulletin be issued.

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THE CANADA LANCET

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EDITORIAL.

KING EDWARD'S CASE.

SO much has been said upon this subject already, that it would seem quite superfluous to return to it again. Restored in health to the love and rejoicing of his people, the King returned to London on the 6th of August, and was crowned on the 9th. The welcome which he recieved, on his return, showed that popular as he was, he had grown very much in the people's affection by his recent severe illness. That his health was good, was abundantly manifested by the ease with which he passed through the Coronation Ceremonies. He walked without assistance, and there was an elasticity in his step that astonished all. Whatever he lost at first, by way of disappointment, has been more than made good by his restoration to health, and the increased love of his world wide empire. While we recognise this great and felicitous result, let us not forget those to whom we owe it. Now that the danger is over, and the King is restored to health and crowned, due tribute of praise and admiration must be paid to the eminent men who waited upon him.

No case could reveal the great progress of modern medical science better. Had the King been taken ill a generation ago, it is fairly safe to say that His Majesty would only have had a few hours to live ; and any five experts at his bed side twenty-five years ago, would have been impotent to avert the terrible calamity. When a case, such as that of the King's, is brought under our notice, we see how far the healing art has marched forward. What has taken place in His Majesty's case, is taking place in thousands of obscure homes, and lives are daily saved, that a few years ago would have been inevitably doomed.

With all the resources that the modern transformation of the healing art placed at their disposal, it remains true that, upon the surgeons and physicians summoned to Buckingham Palace in the first hour of crisis, the emergency imposed a responsibility as grave and critical as has ever devolved upon any practitioners in the annals of medicine. Upon their firmness and fineness of judgment, upon their supreme strength of nerve, upon their unflinching and unerring certainty of executive touch, delicate

yet steel-like, depended the fate of a reign and the hope of an Empire. However they may have been influenced by the emotions which have shaken a vast people throughout the extent of that dominion which encompasses this planet, yet, as medical experts, it was theirs to act with minds as serene and composed as though they were above the agitated sphere of human feeling and viscissitude. In spite of all the shouting done by many members of the profession, who knew so much about the King's illness, though not within thousands of miles of his bedside, we see that those who had his case in charge made no mistake. They were not ignorant of the nature of the ailment that threatened His Majesty, nor was there any hesitation, or error in meeting it when it came. Great courage and fortitude were required, and promptness of action demanded and all were found in the persons of those called upon to attend the King, and to them is due the highest praise that a grateful Empire can bestow.

The name of Lord Lister has been before the medical profession for many a year, and none living have done so much for the advancement of surgery. In addition to his scientific knowledge, he has had a vast clinical experience in surgical cases. Sir Frederick Treves is known to the physicians and surgeons of every country and language, as one of the most brillant of authors, teachers, and operators. In the domain of abdominal surgery and appendicitis especially, he is facile princeps. Sir Thomas Smith's long years of surgical connection with St. Bartholomew's Hospital would bring his way the material to train his mind on the best course to pursue in such a case as that of King Edward's, and Sir Thomas Smith is not the sort of person on whom such opportunities are thrown away. Not a few Canadians have seen Sir Thomas Barlow at his work in London. Those who have had this privilege will at once recall his thorough and painstaking methods. As an evidence of his sound learning, we commend his address on "the study of the natural history of disease the basis of all advance in its treatment," delivered before the recent meeting of the British Medical Association. Sir Francis Laking, in addition to his extensive private practice, has enjoyed extensive opportunities in the wards of St. George's Hospital; and is considered, by those who know him, as the embodiment of sound judgment and of common sense in medicine.

Surrounded by such advisers, the most august personage in the world on the eve of the most august event in his life, would not, so far as human judgment can go, be wrongly advised, or improperly treated. It therefore looks rather out of place, and is certainly in very bad taste, for some surgeons, here and there, to indulge in pyrotechnical displays of their

skill, and what ought to have been done. Verily, if the eminent surgeons and physicians, who waited upon King Edward, had adopted such methods as have been suggested by not a few of those loud shouters in surgery, the chances for His Majesty's recovery would have been annihilated, and the postponed coronation would have been an event of a far different and sadder character. To these self-created wise ones we commend the words of Horace: Sapientia prima stultitia caruisse.

STIMULANTS AND NARCOTICS IN PROPRIETARY MEDICINES.

DRUGGISTS are restricted by law from selling stimulants, except under a doctor's order, and from selling certain drugs that are on the list as interdicted. Notwithstanding this, they can sell any amount of stimulants and interdicted drugs, provided they are put up as proprietary mixtures.

Alcohol, bromides, chloral, opium, arsenic, strychnia, ergot, and others, can be purchased any day, in any quantity, in many of the proprietary compounds on the shelves of our drug stores.

There should be passed, and vigorously enforced, a law to the effect that no proprietary compound, or preparation, could be offered for sale that contained any of the drugs on the list as noxious, or dangerous.

One of the most remarkable things, in connection with the sale of drugs, is that no one but a legally qualified practitioner of medicine is permitted to write prescriptions containing the proscribed drugs, nor can any one but a legally qualified pharmacist open and conduct a drug store, and yet any one, a carpenter, a stableman, a farmer, a blacksmith, or a scrubwoman, for example, may put up compounds for coughs, pains, teething, rheumatism, skin diseases, women's troubles and so on, for either internal or external use.

The usual history of these mixtures is that some one gets hold of a prescription, which had been ordered for some complaint, and puts it up in quantity, and sells it as a cure-all. Frequently, this is done by some one who does not know any thing about medicine, or pharmacy. Fraud is written all over the wrappers, claims being made that are arrant nonsense.

There ought to be a law compelling manufacturers, and those who put up proprietary compounds, to publish on the wrappers the complete formula of the article, or mixture. It could then be seen how far the monstrous pretensions, so often put forth, would be borne out by the use of the concoction. Many years ago a favorite seller contained black oak bark and cheap whiskey, while another was made up principally from

aloes, molasses and whiskey. A certain ointment was made of wax and lard, colored with carrot.

The government should take this matter up, indeed, we believe that the government will have to deal with the frauds and abuses, now practised under the sale of proprietary compounds. It is nothing short of downright fraud to offer an article for sale as a cure for what is known to be an incurable disease It is the duty of governments to prevent fraud. It is also the duty of the government to prevent the adulteration of foods, or drinks, or the open sale of a noxious article. Many of these manufacturers should be made to feel "turpe est aliud loqui, aliud sentire, quanto turpius aliud scribere, aliud sentire."

PNEUMONIA.

ACCORDING to the best accepted opinions, the pneumococcus, or diplococcus lanceolatus of Fraenkel, is never absent in true labor or croupous pneumonia. In association with the pneumococcus, there are numerous other bacteria, such as the stophylococcus, the streptococcus, and Fredlaender's pneumo-bacillus. The bacillus coli communis has been found in some cases along with the pneumococcus. The micrococcus septicaemiae is occasionally found. If an animal be inoculated subcutaneously with the rusty sputum, its blood, as a rule, will contain a pure culture of the pneumococcus.

The pneumococcus does not readily produce pus. When an abscess forms, there is generally mixed infection. Grey hepatization is not a purulent condition. Even though the lung breaks down there may be no pus When the pleural, or peritoneal cavities of rabbits are inoculated with pneumococci, in addition to the local lesions, the lungs show consolidation and congestion. Pericarditis is also a frequent complication.

If the albumose, and organic acid, obtained by extraction from lung tissue infected with pneumococci, be injected into the thorax of a rabbit, there result both fever and consolidation of the lung. The organic acid does not possess the active qualities of the albumose. Cultures have been made in several media, and the albumose and organic acid obtained in this way acts similarly to the albumose and organic acid extracted from tissue containing pneumococci. It may be inferred from such experiments that the albumose produced by the pneumococci is the principal agent in the production of the fever and the local consolidation in the lung.

A most important fact, in the experimental study of these organisms, is that animals inoculated with the toxines of the pneumococcus become more sensitive to the germs and their toxines. It would appear that the

immunity is of short duration, while the injury to the tissues is very persistent; and, consequently, an attack of pneumonia predisposes to another. It would seem that an antitoxine is not formed. It is a bactericidal power that is developed in the serum.

When animals are inoculated with living cultures of increasing virulency, a certain amount of immunity is obtained. These animals could resist doses that proved speedily fatal to those not having been so treated. The animals that are inoculated with increasingly virulent living cultures do not possess in their blood any antitoxine against the toxines, obtained by various methods from the growth of the pneumococcus. Any resistance that may be produced in any animal must be due to something in the bacteria themselves that is inimical to their growth.

It is in this way that the explanation must be sought for that the serum treatment of pneumonia has not been successful. It does not appear possible to develop an antitoxine in the serum. Any immunising that may be produced must be obtained directly by employing the organisms, either living or dead.

A POST-GRADUATE COURSE.

THE time has come when some effort should be put forth to organize a Post-Graduate Course of medical instruction. There are many physicians in Ontario who would be glad to avail themselves of the opportunity of attending such a course of instruction, if it were only placed within their reach. In order to take advantage of hospital work and clinical teaching, they must go to New York, Baltimore, Chicago, or Philadelphia. These centres are excellent, but they are not so easily reached as Toronto to the practitioners of Ontario. Our practitioners could come into Toronto at comparatively slight cost, as compared with the above named places; and could, on short notice, return home if their presence became urgently required.

There is now in Toronto ample hospital facilities for teaching, and clinical work There are numerous suitable lecture rooms and wards where lectures and clinics could be given. It does not require to be argued that there are many in Toronto who are thoroughly competent to deliver lectures, or give clinics and demonstrations on medical, surgical, pathological, or bacteriological subjects. What is lacking is the union of these persons into a group with a common object in view; and that object, the Post-Graduate Course.

The whole field of medicine should be treated as a science. There should be no jealousies in its pursuit. Toronto is now in a position to do much for the advancement of this science in the Province of Ontario.

There are the men, the materials and the facilities. Let there also be the willingness to co-operate, one with another, in the establishment of a Post-Graduate Course, as the most effective means known of raising the standard of scientific medicine in this Province. It may be safely said that the medical educational standard for Ontario is one of the highest in the world; but it has not yet reached its resting place. An important step towards this would be a Post-Graduate Course.

We commend to our readers' attention the following words of Dr. Powell in his presidential address at the Ontario Medical Association: "We have so far failed to make adequate provision for post-graduate institutions. We have the men, the hospitals and the material to meet all needs, but they are not utilized as they might be. In the past, professional jealousy was so keen and controversy so bitter that success would have been hardly a possibility. Now, laus Deo, we know each other better; and out of mutual respect can come united and successful action."

The CANADA LANCET hopes to be able, in the near future, to chronicle the fact that an organization has been effected looking towards this end.

FUNCTIONAL AND ORGANIC PARALYSIS.

DR. THOMAS BUZZARD, at the recent meeting of the British Medical Association, B.M.J., August 9, opened the discussion on this subject. He stated that he meant by "functional paralysis," cases that simulated, more or less closely, those arising from structural change, affecting the nervous system, without being dependent upon any discoverable changes in it; and of such a character that they could be simulated by a healthy person. Functional paralysis could sometimes be removed rapidly or suddenly by persuasion or physical or moral shock. There was probably no symptom which, alone and unsupported, could be relied upon to establish a diagnosis of functional paralysis.

Functional hemiplegia was rarely preceded by an apoplectic seizure, but was gradual in onset, and did not pass from flaccidity to contracture as in the organic form. There was likely to be much more anæsthesia than in the organic form. The functional form rarely, if ever, attacked the face. The Babinski sign was absent in functional hemiplegia; and an effort to sit up in bed, without the aid of the arms, did not raise the affected heel from the bed, which was the case in the organic form. Though gradual contracture was not likely in the functional form, a strong contracture, without previous flaccidity, might take place; but in organic contracture the whole arm could not be extended at one time,

whereas in the functional form, the arm, hand and fingers could be brought into one line at the same time. The deep reflexes, and ankle clonus could not be relied upon, as ankle clonus might be found in functional hemiplegia. The absence of the plantar reflex was strongly corroborative of the functional type. The presence of the toe phenomenon was positive of organic change.

Paraplegia rarely presented difficulty, as the Babinski toe phenomenon and the plantar reflex were wanting in the functional cases. In insular sclerosis, there was sometimes a temporary paralysis of one or more limbs, which should be held to be organic, although there frequently were hysterical symptoms in such cases. These, however, like the paralysis, arose from the central disease.

EDITORIAL NOTES.

Thyroid Extract in Painful Menstruation.

Dr. J. Coplin Stinson, writing in the American Journal of Obstetrics and Diseases of children for July, remarks that he has had some excellent results from the administration of thyroid gland extract in painful menstruation. He contends that it influences metabolism in such a way as to have a specific action upon uterine and ovarian tissue. The vascular and nerve supply to those organs become more normal. The nerves are much less sensitive, and in this way it is really an anodyne to these organs. There is improved pulse, and better assimilation. He gives one grain of thyroidin three times a day for two days before the period, and two or three grains three times a day during the period. The treatment is kept up for some time in the intervals as well.

Puerperal Septicaemia.

There has been much confusion created by the various terms employed in speaking of the fever that occurs shortly after labor. Peritonitis, phlebitis, metritis, pelvic cellulitis and many other names have been given to this febrile state. It is quite erroneous also to speak of puerperal fever as a distinct disease, due to one cause only, as it is proper to speak of typhoid fever as due always to the same germ. In puerperal fever the condition is one of a true surgical septicæmia or pyæmia, and there are a variety of germs capable of causing the disease. The severity and symptoms thus vary somewhat according to the nature of the infection.

Treatment of Epilepsy.

Sir W. R. Gowers, on the treatment of epilepsy, remarks that whether this be with bromides, or any other agent, the endeavor must be to find

a dose of the drug, or a combination of drugs, which is capable of arresting the attacks, slight or severe, and which the patient can bear. This must be continued persistently until it is reasonable to suppose that stability has been established, and then should be discontinued by gradual diminution. It is, therefore, important that the dose should not be larger than can be continuously borne. The doses should be no larger than suffice to arrest the attacks and provide a margin against exciting causes. If the treatment was more persistent than is usually the case, there would be more cures.

Mixed or Coincident Infections.

E. W. Goodall, in writing on the above topic, states that 41,483 cases of infectious diseases admitted into the fever hospitals of London 1,191 were at the time suffering from more than one infection. Scarlet fever and diphtheria occurred together 589 times, scarlet fever and whooping cough 186 times, scarlet fever and varicella 163 times, diphtheria and morbilli 66 times, scarlet fever and morbilli 65 times, diphtheria and whooping cough 34 times, diphtheria and varicella 27 times, and combinations of scarlet fever or diphtheria with rebulla, or enteric fever, a few times. In addition to the above there were many instances of patients contracting a second fever while convalescing. Among 30,417 cases of scarlet fever there were 1,501 cases of diphtheria, contracted in the wards during the illness, or convalescence of the scarlatina, 1,018 cases of chicken-pox, 302 of measles, 197 of whooping cough, and 168 of rubella. Among 9,789 cases of diphtheria admitted there afterwards occurred 768 of scarlet fever, 100 of chicken-pox, 70 of measles, and 38 of whooping cough. Among 1,277 cases of enteric fever there were 9 cases each of scarlet fever and diphtheria.

The use of Alcohol in Fevers.

The following remarks occur in the work on Diet by the late Thomas King Chambers: "The use of alcohol in fevers is regulated partly by the temperature and partly by the condition of the nervous system. If the heat of the blood is above 103° generally, and if above 105° always, there is a necessity for wine. And it should be continued till such time as the temperature is below 101° for 24 hours together. If there is great prostration of strength or tremulousness of the hands or quivering in the voice and respiration, if there is delirium of a low muttering character when the patient is left quiet, then also it is required. Or if the patient is habituated to a full allowance, it is well to continue to give a little. A sharp, weak, unequal beat of the heart is a warning that

some of these symptoms are likely soon to come on. All these indicate that the nervous system is feeling very sensitively the destructive metamorphosis going on, and has its power lowered by its sensitiveness. Then is the opportunity for the strong anæsthetic we are speaking of, which I order without scruple, regulating the quantity and the frequency of the dose solely by its physiological effects, the diminution of temperature and the steadiness of nerve force. But I do not hold it as a specific, or a necessary cure of fever."

Administration of Anaesthetics

Dr. W. Foster Cross, Anæsthetist to St. Bartholomew's Hospital, in the *Medical Times and Gazette*, makes some very pertinent remarks on certain classes of patients in which the administration of anæsthetics is accompanied by special dangers: Alcoholics require a large amount of chloroform, they struggle a great deal, the preliminary stage is unusually prolonged, and there is generally some rigidity throughout the operation. In shock cases and those reduced by long suppuration, very small quantities of chlroform, or any anæsthetic takes rapid effect. The pulse is liable to be very weak in these cases. Even if the pulse is fairly good, it does not remain so long. An equal part mixture chloroform and ether given on lint, is useful in these cases. In cases of intestinal obstruction, the patient is often under the influence of morphia, there is usually distention of the abdomen, frequent vomiting, weak, rapid pulse, and a dusky color of face. The head should be kept well on the side, as the vomiting is often very sudden. The best anæsthetic is a mixture of ether and chloroform. Cases of empyæma require great caution. In these cases it is not safe to use ether by itself, as it excites coughing, and throws strain on the heart, which may be hampered as it is by pressure and displacement. In such cases, it is best to give chloroform. It should be administered carefully, and not pushed deeply. The anæsthetic should not be given till the patient is on the table, as those patients do not stand being transported. When the pleural cavity is opened, the anæsthetic should be greatly reduced, or stopped.

Acute Pleurisy with Effusion.

Much discussion has taken place on whether the above conditions can be caused by cold alone; or, if there must be some other factor in the case, usually microbic infection of the pleura. Dr. George R. Murray, of Durham, in THE LANCET, of May 24, places himself on record to the effect that acute pleurisy with effusion is almost always due to infection by

germs; but that it is sometimes caused by simple exposure and cold, or the pneumococcus, typhoid bacillus the strepto- and stephylococcus pyogenes.

The best method of determing the presence of tubercular bacilli is to inject a guinea pig with the fluid obtained by aspiration. It is necessary to use a large quantity of the fluid. Tested in this way, 85 per cent. yielded positive results, in the guinea pigs. In the German Government's report, on the efficiency of tuberculin, it is stated that 87 per cent. of persons with pleuritic effusion gave the reaction. Tested by clinical method, the subsequent study of cases of pleurisy with effusions shows that a very large percentage become tubercular, ranging from 40 per cent. to 90 per cent. according to the time over which the observations extended. Tested by the post-mortem finding the same conclusions are arrived at. In nearly all cases of death, in acute pleurisy with effusion, tubercles are found in the plura and lung. From 85 to 90 per cent. of cases of acute pleurisy with effusion are therefore tubercular.

Cancer In India.

From the May number of the Indian Medical Gazette we learn some interesting things about cancer. In the first place it is very common among the natives. One-third of the cases occurs in the cheek. This is attributed to the custom of chewing the betal nut. There were not many cases on the lips, as the natives do not smoke pipes. The penis among the Hindoos is a very common situation for cancer. On the other hand, it is extremely rare among the Mohammedans, as they are circumcised. Many cases occurred on the thigh and abdomen, due to the custom of carrying there a fire basket for warmth in Northern India. Malaria had no preventive influence.

Laparotomy During Early Pregnancy.

In the post graduate for July, Dr. Reuben Cronson describes the case of a woman who came under his care in the third month of her pregnancy. On examination he discovered tumors, which he thought were most likely cystic. On their removal it was found that there was a dermoid cyst in each ovary. The patient made a good recovery and went on to full term. The appendix was also removed.

Methylene Blue In Mania.

It has been noted that when methylene blue was administered to patients, it had a calmative and depressant effect. This property has been made use of in Mania. It is given in grain doses hypodermically; or in

two grain doses by capsule, twice daily or oftener. There were no ill effects, nor digestive derangements. The patients slept well, they were relieved of excitement, without dullness, or depression.

Morrison's Operation for Ascites.

F. Telden Brown, M.D., in the *Annals of Surgery* for August describes a case which was operated upon for the relief of ascites, due to Laennec's cirrhosis of the liver. A five-inch incision was made between the ensiform and the umbilicus, and a two-inch incision above the symphysis. The surfaces of the liver and spleen, and the peritoneal surfaces opposed to them were vigorously rubbed with dry gauze sponges, held in long forceps. The parietal peritoneum, in front of the omentum, was treated in the same way before they were sutured by a transverse line of 8 or 10 chromicized catgut sutures. The upper wound was closed. The lower wound was drained by aglass tube, one and one-quarter inches in diameter, through which was led gauze for capillary drainage. The abdomen was well supported by adhesive strapping. Compression of the upper portion of the abdomen was kept up for three months. On the twenty-third day, the large tube was changed for a smaller one. On thirty-eighth day the drainage tube was removed. The patient was greatly benefited.

Our Book Reviews.

We take this opportunity of calling attention to our reviews. These reviews are prepared with the object of giving the readers of THE CANADA LANCET some of the salient features of these very important works. It is hoped the perusal of these reviews will amply repay the reader for his trouble.

PERSONAL.

Dr. J. A. Stoddard of Pueblo, Colorado, formerly practising in Halifax, Nova Scotia, recently paid a visit to the Maritime Provinces. He read a paper at each of the medical association meetings.

The assistant city medical officer of Halifax, Dr. J. M. Purcell, has been in the small-pox hospital ever since last October. Dr. Purcell was rather unfortunate. He would no sooner have one batch ready to leave than another would be forwarded to his care. He is however at length out and we are glad to say the city is once more free from the disease.

Dr. M. A. Curry, surgeon to the coronation contingent, has returned to Halifax looking none the worse for his trip to the old country.

Drs. O. R. Salter, of Oxford, Dr. Beckwith, of Halifax, and Dr. L. M. Crosley, of Yarmouth, were married during the month of July.

Dr. J. A. Mackenzie, assistant medical superintendent of the Nova Scotia hospital, intends leaving for New York shortly on an extended visit.

The death occurred at Yarmouth, N.S., on June 15th of Dr. J. H. Harris. He had heen ill for some time and his end was not unexpected. He had at one time a very large practice, but of late years owing to bad health had given up a good part of it.

The death of Dr. Nelson Price, of St. John, occcurred recently in South Africa. Dr. Price went out with the hospital corps and was doing good work with them when he unfortunately contracted enteric fever from which he never recovered. The death of this promising young man at the early age of 28 is particularly sad.

At St. Andrew's church, Vancouver, Dr. Robert Telford and Miss Ella Maud Munro were married by Rev. E. D. McLaren.

A. McGill, graduate in the person of Dr. A. J. Lomas, has been appointed surgeon on the steamship Botanga. The vessel left England on July 17 for South Africa.

Dr. A. S. Langrill and Miss Margaret Langrill left for the Mackinac islands on August 5th.

Dr. Greene and Dr. Kingsley Gibson, of Ottawa left 5th August for Metis where they intend joining a yachting party and go on a two-weeks' cruise on the lower St. Lawrence.

Dr. F. C. Hood and Mrs. Hood returned to Toronto in the early part of August after an absence in England of several months.

Dr. George Waters, a veteran practitioner of Cobourg died 3rd August at the age of 65. Deceased practised in the town from 1868 till a couple of years ago, when his health failed and the lingering illness, which followed, caused his death.

It is reported that Dr. A. Donaldson of Brockville, who accompanied the Hospital corps to South Africa with the Canadian Mounted Rifles, will not return to Canada, having accepted a commission in the British army.

Dr. Percy E. Butler, Milltown, and Miss Harriet Eleanor Stickney of Calais, were married at the home of the bride in the latter part of July.

Dr. Jonn C. McKinnon, of Antigonish, N.S., who died recently, was 54 years old. Death was due to pneumonia. Deceased took his course of professional study in Harvard University, in 1870, receiving his degree from that institution.

Dr. Pearson James, of Galt, who secured his degree of M.B. at Trinity Medical College last spring, leaves Wednesday morning for Glasgow, where he will take a course in one of the large hospitals.

Dr. William Minaker, who died at Chicago, after a lingering illness, was born at Milford, Prince Edward county, in 1847. He graduated from Trinity Medical College, with high honors, practised in Meaford, Thorold and Winnipeg, ere locating in Chicago in 1884.

Dr. William H. Klock, one of the leading physicians of Ottawa, died at the age of 41. Dr. Klock was a graduate of McGill University of the class of '85. He also held degrees from the Universities of Glasgow and Edinburgh.

Dr. and Mrs. Murray McFarlane spent some time in Newfoundland salmon fishing. They proceeded thence for Maine, and returned to Toronto about the end of August.

Dr. W. H. Groves was appointed surgeon of the Tarquah, the vessel selected for the use of Hon. Joseph Chamberlain and the colonial party at the naval review at Spithead.

Dr. McCort, of Thessalon, returned home from a lengthy visit with friends at Toronto and other points east. His many friends will be pleased to learn that the doctor was greatly recuperated in health while east.

Dr. C. S. Hamilton, of Smithville, who has been seriously ill, is now improving.

Dr. Edmund E. King and family, of Toronto, were holidaying at Hastings for a couple of weeks.

Dr. A. Cranston, of Galt, who has been enjoying a holiday in Alma for three weeks, returned home.

Dr. Goldwin Howland, of Toronto University, has been appointed registrar of the National Hospital for Nervous Diseases, London, England.

Dr. F. Montizambert, director-general of public health for the Dominion, is out West for the purpose of inspecting the quarantine station at William Head and also to investigate general health conditions. He will spend a day at Vancouver on his way to Victoria.

Dr. Alex. Roberts, of Lanark, left a short time ago for Dawson, Yukon, whence he goes to practice his profession.

Dr. Dowling, formerly of Eganville, has been appointed medical adviser for the St. Charles' Home, Water street, Ottawa.

We regret to record the death of Dr. Christie, M.P. for Argenteuil County. He was a firm believer in total abstinence. He was honest always in the expression of his views. He was a man of kindly nature and good abilities. The record which he leaves behind him is creditable to himself and to his country. He died at his home in Lachute 5th August.

Dr. R. Ernest McConnell, son of Dr. J. B. McConnell, of Montreal has been appointed senior physician in charge of the burgher camp at Volksrust, in the Transvaal.

Dr. and Mrs. Hooper, who have been guests of Mrs. J. P. Mackay, Westmount, have returned to St. Catharines.

Dr. Hutchison has taken up his residence in the house lately occupied by Dr. Chown, corner of Donald and Ellice Sts., Winnipeg.

Dr. G. Sterling Ryerson, of Toronto, returned in the early part of August from his trip to England. He was attached to the Colonial Contingent by Order of the Imperial War Office; and was detailed to the medical charge of the New Zealand Contingent. He reports having had some very interesting experiences with the New Zealanders.

Dr. Herbert Roaf, who graduated at the University of Toronto last spring, has been appointed to the Colonial Fellowship in the Department of Pathology of the University of Liverpool.

BOOK REVIEWS.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION, FOR THE YEAR 1901.

THIS volume contains a number of excellent papers on Climatology, Respiratory and Circulatory diseases. A large portion of the book is devoted to the home and sanatorium treatment of tuberculosis. The book merits reading.

HUMAN AND BOVINE TUBERCULOSIS.

Prof. Adami's Report.

EVERY word upon this subject from a reliable source is of value. The Report of Prof. J. George Adami on Bovine Tuberculosis, addressed to the Minister of Agriculture for Canada, is to hand. It has been well known that he has been working upon this important subject for a number of years; and naturally one turns to his report for the results of these years of labor. His conclusions are:

Tuberculosis is readily communicated from cattle to cattle, either by the inhalation of dust, through milk, by contamination of stalls and drinking water, through saliva and nasal discharges, or rarely by intra-uterine infection.

Human tuberculosis is transmissible to cattle, either by pure cultures, or more readily by mixed infections.

Certain breeds of swine appear to be readily infected with both human and bovine tuberculosis.

Human tuberculosis in the great majority of cases, is conveyed from one person to another, either by inhalation, by the alimentary tract by the genital tract, through wounds, or in utero. All evidence goes to show

that the bacilli infecting a human being comes from a previous case in man, in the great majority of instances.

By their sojourn in the human body, and passing from man to man, the bacilli have acquired properties differing from the bacilli of cattle, in shape and rate of growth.

These differences appear to be only such as living in different animals is capable of producing, and that these different bacilli are only varieties of one species. The bacilli take on the characteristics of those of that animal, regardless of the source from which they originally came.

Bovine tuberculosis can be conveyed to man either through the digestive canal, or by wounds, in the latter way oftenest.

The passage of the baccilli through cattle renders them less virulent for man ; but more so to cattle, guinea-pigs or rabbits.

In the case of children, the frequency of intestinal and abdominal tuberculosis must be accepted as conclusive evidence upon the frequency of infection through milk. In order that such infection may take place, it would seem that the milk must come from cattle extensively diseased, especially with udder disease.

All measures for the reduction of the disease among cattle are necessary, as it will avert much loss to the farmer, and considerable risk to the community.

Dr. Adami is to be congratulated upon his able report, and the skill with which he has avoided extreme views.

HARE'S PRACTICAL THERAPEUTICS.

A Text-Book of Practical Therapeutics, with special reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia, Physician to the Jefferson College Hospital, etc., etc. Ninth edition, enlarged, and largely re-written. Illustrated with 105 engravings and 4 colored plates. Lea Brothers & Co., Philadelphia and New York. 1902.

IN 1890, the first edition of this work appeared. In the twelve years that have elapsed since that date, no less than nine editions have appeared. This alone is comment enough in praise of the work. The work is divided into four sections : General therapeutical considerations ; drugs ; remedial measures other than drugs and feeding the sick ; diseases ; table of doses, and index of diseases and remedies. Under each of the above headings, excellent advice and information can be found, in a readily available form.

The first part of the work deals with general therapeutics, and, as might be expected, discusses the methods of administering drugs, their dosage, idiosyncracy, incompatibility, weights and measures, classification

of drugs, absorption, etc. In every one of these topics useful information is furnished.

The second part of the work takes up the study of drugs under an alphabetical arrangement, instead of under some fanciful system of grouping them either chemically, botanically or therapeutically. The common names of the drugs are used, though technical names are also given. Thus we meet with charcoal, carbolic acid, chromic acid. iron, etc., as the titles to the descriptions of these drugs. The comments under each drug are brief, pointed, accurate and up-to-date. There are many excellent formulæ and suggestions on the best methods of prescribing the drugs, either alone or in combination.

The third part of the work is specially interesting. It deals with 'remedial measures other than drugs and foods for the sick." In this section acupuncture, antiseptics, antitoxin, cold, counter irritation, disinfection, heat, inhalations, lavage, rest, climate, transfusion, venesection, etc., etc., receive due attention. This section will repay careful study. There are very many valuable suggestions contained in it.

The fourth part is devoted to the treatment of diseases, which are taken up in alphabetical order. This portion of the work consists of 255 pages. It leaves nothing to be desired, as the suggestions are timely and reliable. At a glance, the busy man can find what is considered the best thing to do in almost every disease.

The book contains 857 pages and is printed and bound in most attractive style. In matter and form, it would be hard to imagine anything better than Hare's Practical Therapeutics.

DISEASES OF THE NOSE, PHARYNX, AND EAR.

Diseases of the Nose, Pharynx, and Ear. By Henry Gradle, M.D., Professor of Opthalmology and Otology, Northwestern University Medical School, Chicago. Handsome octavo of 547 pages, profusely illustrated, including two full-page plates in colors. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $3.50 net. Toronto, J. A. Carveth & Co., Agents.

DURING the last few years there have appeared a considerable number of excellent books dealing with diseases of the nose, throat, and ear, but we think this one quite the most readable. It deals with the anatomy and physiology in brief, yet sufficient space, while symptomology and treatment are not burdened with a long list of matter, clipped from other works. It has been the author's aim to give in detail only those procedures that have stood the test of clinical experience.

There are few omissions of things that are new and of *tried utility*. He depreciates too much reliance being paid to the various antiseptic

tablets and fluids in nasal irrigation, since they have no therapeutic influence beyond their mechanical effect: He prefers the hydrocarbon oils made up with oil of cloves, menthol, or oil of wintergreen. Regarding the toxic effect of cocaine in nose and throat surgery, he states that in thousands of cases he has used a 20% solution and has not had any toxic effects. In the next sentence (page 72) the author speaks of occurrences that are not uncommon in which patients so anæsthetised feel faint and very nervous, necessitating their lying down for a few minutes. We do not think this can be entirely explained by the shock of the operation, as the occurrence is fairly common before operative measures have taken place and we think is usually ascribed to cocaine poisoning. Nirvanin is highly spoken of as a substitute for cocaine. There are no toxic effects, but this is offset by the necessity of using the drug by injecting it into the tissues as it will not act on the free surface of the mucous membrane. The chapters on accessory sinus disease are concise and thorough. The illustrations from Zuckerkandl are very clearly outlined. In connection with nasal synechia no mention is made of the difficulty of preventing re-union or the use of rubber splints. which are so useful in these troublesome cases. In connection with adenoids, a point, too frequently omitted by writers now-a-days, is strongly insisted upon, viz:—"If the adenoids are not removed a hypertrophic condition of the turbinals, especially the posterior ends, as well as septal overgrowth, are very often found in older children." The author's experience has led him to condemn narcosis for adenoid operations. If he can operate thoroughly without narcosis he is singularly fortunate. We think the operation brutal without anæsthesia and unjustifiable when such safe agents as nitrous oxide gas and, if *skillfully* given, hydrobromic ether are available. The shock following these operations is sometimes severe and cases of death have occurred due to it when the operation is performed without an anæsthetic. Under hay fever, the author says a person who is poor and uneducated is practically proof against this disease. In connection with diphtheria, 300 to 600 units of antitoxine are given as sufficient for immunizing purposes. The CANADA LANCET, July, 1896, has an article proving the fallacy of this view. Diseases of the ear take up 189 pages out of a total of 534, and there is, therefore, considerable curtailment. The various tuning fork tests and their significance, and the diseases of the labyrinth might be considerably enlarged upon. Under the treatment of Eustachian catarrh the author says it can be permanently *cured* by a single inflation in those cases in which the inflammatory process in the naso-pharynx has subsided without leaving permanent lesions. One does not often get such happy results in this country. Under adhesive

or proliferative inflammation of the middle ear, the author recommends a Politizer bag or Eustachian catheter for the patient's use at home No mention is made of Dundas Grant's self inflator, which is often of more use in the patient's hands than the Politizer bag in the surgeon's. It is also advised that if pneumo-massage shows no decided benefit after a few sittings, the patient may be permitted to use it at home for a few months. At the end of this period the patient might have a very flaccid membrane and a considerable increase of deafness. Regarding the prognosis of deafness the author says: "The history of steady progressive deafness with tinnitus not controlled by inflation, the demonstration of Eustachian obstruction and the absence of gross lesions in the nose, give the therapeutist little chance of successful intervention. The so-called sclerosis of the middle ear cannot be influenced by any known means." Dr. St. John Roosa once remarked in speaking of these cases, "Yes, gentlemen, they will all hear, but it will be when Gabriel blows his horn." The suppurative diseases of the ear are carefully considered. In cases where a carious spot is found on the external surface of the mastoid leading to some cells below the antrum, the author depreciates opening the mastoid antrum unless it is distinctly indicated by the clinical signs. In operating for the relief of mastoiditis, the author advises following any sinus that may be found on the external surface of the bone. This we cannot agree to, as the sinus does not always lead to the antrum, and if it should it usually does so in a very roundabout way, besides in following a sinus one does not know where his instruments are in relation to the lateral sinus or facial nerve as he does if he goes direct to the antrum immediately behind the spine of Henlè. The technique of Ballance's skin grafting is omitted entirely. Diseases of the auditory nerve occupy but one and a half pages More can be done for these cases if they are carefully investigated, particularly in the anaemic and congested forms, than is usually mentioned in text books.

The preface says the book does not pretend to be an encyclopedia, and hence lacks literary and historical completeness. It is this that makes the book of most value to the general practitioner who wants an up-to-date work that he can easily read and comprehend. In this the author has admirably succeeded.

SAUNDERS' MEDICAL HAND-ATLASES.

Atlas and Epitome of Abdominal Hernias. By Privatdocent Dr. George Sultan, of Cottingen. Edited, with additions, by William B. Coley, M.D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons). With 119 illustrations, 36 of them in colors, and 277 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $3.00 net. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

THIS new edition to Saunders' series of Medical Hand-Atlases covers one of the most important subjects in the entire domain of medical teaching, since these hernias are not only exceedingly common, but the frequent occurrence of strangulation demands extraordinarily quick and energetic surgical intervention. While the well-known work of Macready will always remain a classic, it has never made any claims to deal with the operative side of the subject, and this is a side that, during the last decade, has been steadily growing in importance, until now it is absolutely essential to have a book treating of the surgical aspect of the subject. This present atlas does this to an admirable degree, and without question, will prove of very great value to the general surgeon and practitioner.

The illustrations are not only very numerous, but they excel, in the accuracy of the portrayal of the conditions represented, those of any other work upon abdominal hernias with which we are familiar. Indeed, like all the other numbers of this excellent series, the work is a worthy exponent of our present knowledge of the subject, and in its field is unrivalled.

The work deals with hernia in general, and special hernias. Under the first portion the questions of frequency, origin, general diagnosis, general treatment, accidents of hernia, strangulation, and the treatment of strangulation.

The second portion treats of the special varieties, as inguinal, femoral, umbilical, obturator, sciatic, perineal, diaphragmatic, ventral, lumbar, internal hernias.

The combination of short, clear description, and such superb illustrations, make the book practically perfect.

CORRESPONDENCE.

The editor does not endorse nor hold himself responsible for the opinions expressed by correspondents.

Editor of CANADA LANCET: ST. CATHARINES, 1902.

BOTH the ruling authorities and the professors generally of the Medical Colleges in Canada have hitherto displayed chronic indifference with regard to the creation of a permanent medical literature for this country. At present they show no intention to change their minds.

The medical institutions of this country, about ten in number, are either faculties of Universities, or like Trinity Medical College at Toronto, in direct affiliation with Universities. Nevertheless, neither their University Associations, nor the time honored standing of medicine as a learned profession, nor yet personal ambition, has incited the professors to become authors of medical books. The college authorities on their part have been content to forego literary standing for their institutions to the extent even of depending entirely on foreign authors for the text books and books of reference needed in the courses of medical study. This admission of inferiority deserves animadversion. *Sera nunquam est ad bonos mores via.* Hopes of reformation are to be entertained.

I make no comparisons with the older countries of Europe, but cross the International boundary into the United States which, it will be observed is a new country like Canada, where a striking contrast is exhibited between the vigor and progress of our neighbor in the creation of a national medical literature, and the inertia and backwardness under comment. Actuated by a praiseworthy ambition, numerous professors of American medical colleges, likewise many physicians on the staff of large hospitals although not professors in colleges, have written books in great numbers on all the various branches of medicine, which have extensively displaced European text books for college use, as well as in the libraries of physicians in the United States. They have done the same in Canada.

American medical authors have attained a position of equality with those of Europe in the medical world of letters. The first move yet remains to be taken by Canadian professors of medicine to acquire similar standing. The general catalogues of medical books are in evidence. According to custom the annual announcements of the Canadian Medical Colleges contain lists of the text books and books of reference recommended to the students for study and adopted by the professors as authorities. Not a work is mentioned in those lists that I can discover written by a professor in any of those colleges. The majority of the books are of American production. The balance are European. Such abject dependence on foreign authors for college text books is indefensible

An excuse for the condition of affairs just outlined has been heard to the following effect. The demand for medical books written by Canadian authors would probably be confined to this country, and on account of the small population, would be published at a loss. This excuse implies that Canadian professors of medicine have no love of authorship of medical works for its own sake. For its rejection one reason is supplied by the familiar aphorism,—"there is always room at the top," for medical men. Let the professors of Canadian Medical Colleges write books of as high a grade of excellence as that which they boast is maintained by their institutions in the education of students to become successful physicians both abroad and at home, and their works will be read on their merits outside Canada. With regard to the home demand, there are 6,000 physicians in Canada, a number constantly increasing, who are available to purchase Canadian medical works and are doubtless willing to do so if they are really meritorious. The authorities and professors together, of the Canadian medical institutions, can easily arrange their college carriculums in order to secure the use of approved Canadian text books by their many hundreds of students.

A well defined aspiration should be entertained to give Canada high standing for its medical literature. Following precedents set in other important activities, as an expeditious move towards the desired production of superior Canadian medical text books I suggest that a conference be held of representatives from the medical colleges of Canada to procure united and harmonious action. I trust there are professors of high scholarly and professional attainments available to write such books.

Yours truly, LUCUES S. OILLE.

MISCELLANEOUS.

MEDICAL EXCHANGE.

OUR readers who contemplate changing their location would from month to month secure a short cut to their needs by watching the offers of Dr. Hamill on our advertisement page under The Canadian Medical Exchange heading. Some of the best practices for sale sometimes do not appear among his list as they are sold during the interval of the issues of this journal, but if you make your wants known to him you will receive all offers which present by private letter.

FOR PRURITUS ANI.

℞ Betul-ol (Methyl-Oleo-Salicylate Co ..... ℥i
Salol ..... gr. xx
Ol. Olivae ..... ℥ii
Misce ft. M.

Sig. For external use by painting over the surface.

FOR PAINFUL STIFF JOINTS, SPRAINS AND MUSCULAR RHEUMATISM.

℞	Olei Terebinth	ʒiii
	Betul-ol	ʒii
	Acid. Oleici	ʒii
	Menthol	ʒi
	Sp. Vini Rect	ʒiii

Misce ft. lin.

Sig. For external use by friction, or if too tender, applied to any muscular part of the body, as this liniment will be easily absorbed by the skin and carried by the circulation to the seat of the lesion.

SANMETTO IN ENURESIS AND ATONIC OF THE GENITO-URINARY ORGANS.

WESLEY H. Watson, M.D., Cincinnati, O., has used Sanmetto for the past eight years, and can truthfully say that it has been an aid in practice, in such cases as enuresis, catarrhal trouble and atonic conditions of the genito-urinary organs. In every case where it was used faithfully it proved to be a potential remedy.

BOVININE IN SKIN GRAFTING.

DR. T. J. BIGGS, of Stamford, Conn., speaks highly of Bovinine in skin grafting. The part to be grafted is prepared by means of a skin curette, and a Thiersch pack for 24 hours. A bovinine pack was applied for 24 hours, and kept wet with it. The grafts were then placed and fastened with strips of perforated rubber tissue. Over this was placed sterilized gauze saturated in bovinine and a bandage applied. The dressings were kept wet with bovinine for a number of days, until the grafts became united.

THE TREATMENT OF PAIN.

CONSTANT demands are being made upon the members of the medical profession for something to relieve pain. Dr. Hugo Eugel, in the Boston Medical and Surgical Reporter, speaks highly of Antikamnia, for all kinds of pain. He gives gr. V, and in ten minutes, a second dose of a similar amount, followed in ten minutes by a third dose if required. He has found this method very valuable in all forms of pain.

PARKE, DAVIS & COMPANYS' PRICE LIST.

THIS firm recently issued a very complete list of their Preparations and their Prices. A copy was sent to every physician in Canada; but if any one did not receive one, a duplicate will be gladly forwarded on receipt of request.

FERROLEUM, LONDON OFFICES.

MR. F. M. TUCKETT, representing Ferroleum, has opened offices at 86 Clerkenwell Road, E. C. He extends a cordial invitation to physicians, visiting London, to call at these offices, when he shall be glad to do what lies in his power to entertain such visitors.

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PRESIDENTIAL ADDRESS.*

BY FRANCIS J. SHEPHERD, M.D.

Professor of Anatomy, Faculty of Medicine, McGill University.

IT has been said by a well known scientific authority that bores must be classed among the enemies of the human race, and perhaps one of the most objectional species of this large genus is the Presidential Address Bore. One of the "privileges" of the President of this Association is to deliver the annual address; he is the victim of circumstances, and so the members of the Association must not find fault if bored. I trust, however, that what I say will not prove altogether uninteresting—at any rate if you are bored it will not be for long, for my address will have one thing to recommend it—that is, brevity.

First, let me welcome you all heartily to our city; I hope your visit will be of value to you, not only from a professional standpoint, but also from a social one. The great advantage of these meetings is not so much what one learns from the papers and discussions of the sections, but from that personal intercourse to which such occasions give opportunity—the interchange of thoughts and ideas and the estimating of our fellow members, not only as surgeons and physician, but as men, who, like ourselves, are doing their best in this life and trying to solve the difficult problems which are continually confronting us all. At these meetings many friendships are made which last a lifetime. As Horace says, "There is no pleasure equal to that given by a pleasant friend," and the members of the profession from the extreme limits of this great Dominion, meet and are brought together under the most favorable circumstances. Teachers meet their old pupils, and students their old companions, and, perhaps, rivals. The mystery and clouds which enveloped the old professor, who was looked upon with awe and from a distance, are now dispelled and reveal a human being even as themselves. The man who is only known by his books, or by what he has written in the leading journals, and whose opinion, perhaps, has been regarded as almost infallible, often appears as a very ordinary individual without much personality; others again, of whom we have never heard, impress us much by their force of

*Delivered before the Canadian Medical Association, Montreal, Sept. 16, 1902.

character and the intimate knowledge of their profession which they possess. The man from the east who is slow to adopt new ideas and new methods, is rendered almost breathless by the procedures, apparently most successful, of his professional brother from the west. One reacts on the other; the pace of one is hastened and that of the other retarded, to the benefit of both.

This certainly is a great opportunity for all of us to interchange ideas, and such meetings tend to weld the profession together and to obliterate sectional jealousies. It is well sometimes to remember that we are all Canadians, as well as medical men, and that our interests are those of the Empire as well as of Canada. This community of interest will be much strengthened and accentuated if the Dominion Registration Bill, which has, during the last session, been passed by the Dominion Parliament, be, with the consent of the various provinces, put in force.

Dr. Roddick's Bill.

Ever since I commenced the study of medicine in 1869, I have heard about a Dominion Registration Bill. For years, at every meeting of this Association it has been discussed. Several bills were drawn up and such men as the Hon. Dr. Parker, of Halifax, Sir Chas. Tupper, Dr. R. P. Howard and others, were engaged in trying to frame a bill which would be acceptable to all parties, but all in vain; failure after failure resulted, and for a time it was given up in despair. At last a champion arose who valiantly attacked the dragon and successfully vanquished him. You all know him—Dr. T. G. Roddick. I congratulate him on the courage, persistency, skill and ability with which he has pushed through his Medical Bill in the face of many obstacles. It remains now for the different provinces to pass a short act by which the Dominion Bill can be worked. The Dominion is ready for the carrying out of the provisions of the Bill as soon as the provinces agree to it, and I trust that no one province will decline to act and so selfishly render the Dominion Bill inoperative. The first step has been taken and the first barrier overcome; let us hope now that the other obstacles will soon be removed, and then—a man who has fulfilled all the provincial requirements and passed before the Dominion Board will have the whole Empire ready for him to practice in and all the public services at his disposal. Why, I know of several cases where men, serving as surgeons during the late war in South Africa, could not attend Imperial troops because, forsooth, they had not a license to practice in Great Britain, nor could they ever hope to join the Army and Navy Medical Services.

Such a condition of things is a reflection on our citizenship and a slur on our Imperialism. It only remains for the provinces to remove the

disability by accepting the Roddick Bill and so enlarging our opportunities by throwing open practically the whole British Empire to our medical men.

Medical Progress.

It would be useless for me to attempt to describe to you the great advances that have of late been made in medical science, for you are already very familiar with them. For some time it was thought that surgery was outstripping medicine in the race for knowledge, and many regions which were in the exclusive possession of the physician were rudely annexed by the surgeon, and even yet the surgeon is not satisfied, but like the horseleech's daughter, calls for more. Only this year that disease so intimately associated with the physician and named after one —Bright's disease—has been treated surgically and with some success. The surgeon is still struggling for the possession of this, up until now, distinctly medical disease which the physician is not so willing to part with, waiting with his usual caution for more light.

However, medicine has not been standing still, but has made many advances and has done most magnificent work in various departments. It has fought for this knowledge with great courage and has left on the battlefield not a few heroes, who have fallen bravely fighting with their faces to the foe. I refer especially to the magnificent work done in Cuba in regard to the discovery of causes of infection of Yellow Fever. And what is the result? Why, a region which has been for centuries a pest-house at certain periods of the year, has become a veritable sanitarium. Yellow fever has been abolished from Cuba, because it has been proved beyond doubt by experiment that the mosquito conveyed the disease, and that if the breeding places of the mosquito were abolished and the fever patient was isolated so that the mosquitos could not bite him, they could not convey the disease to others. The chief honour and praise in these investigations must be awarded to Walter Reed, Carroll and Agramonte. Good work is still going on in the investigations of malarial fevers and it is the hope of all of us that this troublesome and widespread disease may in time be abolished. It is useless by ordinary means to hope to destroy or rather exterminate the mosquito, but, by removing stagnant water and covering their breeding places with coal oil, and sleeping at night under nettings, the disease may be in many cases avoided; but, until we can discover some such means as inoculating the mosquito with a fatal disease and so exterminate him, malaria will be more or less always with us, especially in the tropics.

We have all heard much of the white plague (tuberculosis) in the lay and medical press, how it is propagated, how it may be prevented,

how it may be cured; the world has become rather hysterical on the subject, and, no doubt, good will come of it all. But there is another plague, stalking boldly in our midst, and flaunting its banners with the greatest insolence, carrying off its victims by thousands, and disabling and disfiguring thousands of others, the innocent and the guilty with a remarkable impartiality, and yet no notice is taken of it; it is silently ignored. We must not discuss it or speak of it or suggest remedies for its extermination; like many things in the Pacific Islands, it is tabooed. We take the utmost care to prevent people catching measles, scarlet fever, chicken-pox, etc., and allow syphilis to come and go amongst us unnoticed and apparently uncared for. It is a most remarkable state of affairs. A poor leper, from whom the chance of taking the disease is small, is shunned, banished and isolated, whilst the syphlistic is allowed to spread the disease at will, without restraint. It is appalling to think of the risk we all run; the innocent suffer often more than the guilty. Because the disease is now a sexual one, although it was not so originally, we must not control it or arrest its spread, or endeavor in any way to ameliorate the condition of those unfortunates who suffer from it. Our neighbors across the line will not allow emigrants with favus to land, but welcome the syphilistic if he have a few dollars in his pocket. Is it not most illogical to build hospitals in order to protect people from measles and scarlet fever, and to allow syphilis to spread itself unchallenged? It is time that the profession took this subject up and educated the public to a better knowledge of the sanitary laws.

Modern Laboratory Teaching.

In the wonderful developments of all branches of science, medicine has not lagged behind and the world generally is becoming much interested in the many discoveries in medical science which have lately taken place. Money is being left and donated in large quantities to stimulate still further exertions in the line of research; special sums are being set aside for the experimental study of the origin and cure of certain diseases, such as carcinoma, tuberculosis, etc., and immense amounts have quite recently been given by the multi-millionaires for the erection and maintenance of splendid laboratories, which are intended not so much for the teaching of students as the encouragement of research work.

The medical school is developing into a huge system of laboratories to the exclusion of the lecture, and even the hospital; for the day has not got any longer and laboratory work takes time. We must not forget, however, that laboratories, triumphs of architecture though they be and equipped as they are with all the modern scientific apparatus, will not

themselves produce men of science, they will only give them the opportunity of developing. Such giants as Pasteur, Lister, Koch and others, were not produced by magnificent laboratories or splendid inducements of fellowships, etc., they made their opportunities and forced nature, by the power of their intellects, to give up her secrets; difficulties only stimulated them to still further efforts. Such men are not found at will, but they are born like poets only occasionally. To paraphrase Sir Thomas Browne—"They do most by laboratories who could do much without them, and he that chiefly owes himself unto himself is the substantial man."

One danger of this great multiplication of laboratories is that it induces men to pursue original investigation who have not the true scientific spirit, and who are utterly unfit for such work. They frequently collect and publish a mass of useless and undigested material and therefrom draw inaccurate conclusions. All this will not redound to the credit of medical science. However, we must hope for the best, knowing a large amount of good work will be done and many valuable discoveries made. I do not wish it to be inferred that I am opposed to the addition of modern laboratories to our medical schools, they are all necessary, but they must not supplant other work quite as important to a man who wishes to become a practicing physician or surgeon. Again we must remember that the Millenium will not be brought about by laboratories, nor will all scientific problems be solved by them.

There is one laboratory which is not so much frequented now as when I was a student, I refer to the hospital wards. Students, while perhaps more scientific—I say scientific because nowadays every one who spends much of his time in a laboratory learning the use of all kinds of modern apparatus, including our old friend the microscope, is regarded as having a scientific training—I may say that students while perhaps being more scientific (microscopical and mechanical), have not that intimate personal knowledge of disease which continued observation at the bedside gives them, so that when started in some out-of-the-way place without their scientific machinery, they are like fish out of water. It may soon be that they will not be able to diagnose a fracture without the X-rays, a suppuration without an elaborate system of cultures of the various cocci, typhoid fever without the Widal test, diphtheria without finding the Klebs-Loeffler bacillus, tuberculosis without getting bacilli in the sputum, and so on without end. Students are not taught to observe so accurately the evident symptoms of disease, and as I say, are becoming mere mechanics who need an armamentarium (which only a great hospital or university can possess) to make an accurate diagnosis of an ordinary

disease, the higher and more intellectual means of drawing conclusions by inductive reasoning are almost neglected.

This mode of education may do for the few, but for the many who have to practice away from centres, it is not the best method. The reason of it all is that most colleges are now managed by laboratory men who are specialists from the start and who have never practised medicine, and so never have appreciated the needs of students who, when they graduate, will have to earn their living by attending sick people. The practitioners who are connected with the colleges are too busy, and not living on the premises, so to speak, give up the management gladly to those having more time and having new ideas which they wish to have carried out, especially on laboratory lines. They are eager for original investigations and encourage their men to do such and such a piece of work, forgetting that these men have first to learn the rudiments of a profession by which they have in future to make their living, and that the laboratory work is only a part of their training.

In a recent address delivered at the last meeting of the British Medical Association, Dr. William Japp Sinclair says :—"It was the devotion of the gifts of genius, of the highest intellectual endowment, to clinical investigations, which lent dignity to the labours of former generations of physicians and surgeons, and made their counsels fruitful in conferring permanent benefit on humanity. Enlightened and patient industry, and success in observation and treatment of disease, were long and tedious, but the only sure way to professional distinction and honour. But now, since the advent of the modern development of pathology, and especially of bacteriology, the unknown is accepted as magnificent by the whole medical profession, and a certain distinction can be achieved without much talent or industry ; the microtome and the cultivation tube (though work connected with them often resembles a sad mechanic exercise), have provided a royal road for men into fields of clinical work they have not known how to cultivate. They have shirked the apprenticeship to clinical medicine, yet claim the consideration and emoluments due to the skilled and experienced journeyman."

Now hospital training is most essential to a true knowledge of disease and continual observation at the bedside with good tutorial instruction is a more important factor in the education of a medical man than the best and most complete knowledge of all the bacterial forms. How to properly examine a patient, how to question him so as to get all the salient points of his illness, how to observe his deviation from the normal in posture, color, expression and conduct— how to examine all his

excretions and to tell how they differ from those in health; observe the character of the tongue and pulse, the breathing, etc., are essentials. After this the blood may be examined and other methods used to confirm or disprove our previously conceived idea of what the patient is suffering from. All this is much more important than a repetition of a series of experiments in laboratories and the culture of innumerable bacilli, common and rare. Mind you, I do not wish to disparage laboratory teaching, it is essential, but we can have too much of a good thing, and laboratories nowadays take up too much of the student's time in the latter years of his curriculum. The ordinary student should have a good working knowledge of laboratory methods, and this should be obtained chiefly during his first two years, but the refinements if insisted on will be acquired at the expense of some more useful and practical information, for the average student can only hold so much knowledge—it is hopeless to attempt to put a quart measure into a pint pot.

I would suggest that among students only a selected few be made use of for research work and that the average man be not freighted with too much laboratory ballast, but that room be left for other kinds of cargo, the use of which may prove of great value in the voyage through life. Post-graduate medical research work should also be encouraged by every university and opportunities given to every suitable person to continue lines of work for which he is most fitted.

In this connection I should like to read you an extract from an address delivered before the Medical Society at Oxford in 1895 by the late Professor Sir George Humphrey, of Cambridge—"There is too great a mass of facts heaped on the memory and too little reflection on them, too great a straining after the practical and too little aspirations for the principles upon which good practice must be based. . . . . The sciences of physiology and histology have become, and those of pathology and anatomy are becoming, more separated from medicine, delegated to special teachers and special examiners—doubtless to the advantage and width of scope of those sciences and to the greater knowledge of them, but I fear there is hereby engendered a tendency to take the student too far afield. . . . . It is apt to lead too much to meandering in altitudes, too little to straight going upon *terra firma*, too much to pride and obstrusiveness of supposed higher knowledge, too little to reasoning and too little to power of reasoning upon simple data, and too little to that sort of reasoning which constitutes the basis of "Common Sense." The scientific and the practical, in short, become too much separated; what is needed is a greater regard to that connection between the two which should be maintained through the whole period of study."

Specialism.

Another tendency in medical education is specialism. In some universities they are advocating allowing men to graduate in special lines, such as ophthalmology, dermatology, medicine, surgery, gynæcology, etc. This seems to me to be most pernicious, tending to develop much narrowness and also to exaggerate the importance of certain specialties and the public will suffer accordingly. The "malade imaginaire" will always find he has something not exactly right, but what, depends on the specialist he consults. Nowadays, even the most advanced are agreed on the importance of acquiring the rudiments and learning the principles of medicine and surgery and to practice them before commencing the study of any specialty. I do not say that the study of specialties such as otology, opthalmology, gnyæcology, and even dermatology should be neglected—on the contrary we should study them all—but in their relation to and bearing on general medicine and surgery, we should have a good working knowlege of each, but an excess of time should not be devoted to any one. A year or two of hospital work followed by some experince in general practice should be managed by anyone who wishes to become a broad-minded specialist. In this way he gets a wider grasp of medicine and is less liable afterwards, when he gravitates to a specialty, to run in such narrow grooves.

It is the fashion now for men to go into medicine purposely to become specialists, not that they have any particular aptitude or leaning towards their special choice, but because the opportunities for making money are greater and their time will be their own—they only learn enough medicine and surgery to qualify for a degree. Such a training, although it may be a financial success, will tend to bring the practice of medicine down to a mere trade and the higher and nobler instincts which ought to stimulate a professional man will be no more seen amongst us.

Quackery.

I had intended touching at length on the various quackeries which are now so rampant among the most civilized nations and amongst their most cultivated classes, but time warns me I must be brief. I refer to such things as Christian Science, Mental Science, Spiritualism, Vitapathy, Osteopathy and such like—but perhaps they have their uses in this rapid and restless age—they probably are a vent for people who would otherwise have to be confined in asylums at a great expense to the public, Could any individual write such a lot of stuff as the following without there being a suspicion of insanity in the case? "If I believe in the power of disease, my thought atmosphere could not heal a patient. Disease has

no power of its own but only as much power as our ignorance concedes to it. Disease is ignorance, intelligence is cure. Disease is but a negation of the obiquitous life principle. This life principle has taken entire possession of me and my thoughts, I live in it. I am it." Such stuff as this, *ad infinitum*, is read and believed in by thousands—believed in but not understood. Education will not abolish belief in quacks and quackery. I wrote an article on quackery many years ago, which was published in the Popular Science Monthly, and I closed with the following quotation, which seems appropriate on the present occasion:—"The final though distant extinction of quackery is to be hoped for. It forms a fragment of that final triumph of reason and virtue which is the secret consolation of every philanthropist."

It is partly due to the profession itself that quackery flourishes. So many men who are unfit for the profession enter it and look on it as a business to make money, honestly perhaps, if possible, but to make it even if the credulity of the public is drawn on. Many of the doctors who write to papers like the "Alkaline Clinic," the "Medical Short-cut" and others of such character, have a most misty idea of their profession and apparently are ignorant enough to deceive themselves as well as the public. I fancy they practice all the pathys,—one man from Texas asks the editor if he has anything that is a "dead shot" for eczema, another asks what is the most 'up-to-date scientific caper" for goitre, and so on; one specimen of sputum from an old lady, which was sent to the editor for examination, contained tubercle bacilli, diplococci, pneumo-bacilli, saprophytes and pus cells. Another patient from the writer's description of her case, is diagnosed as having an extra vulnerability and an extra colony of microbes in her mouth. Such is the literature many feed upon, always looking for tips and sure cures, never accurately diagnosing the disease and always changing treatment. Is it any wonder that quacks flourish? It is a curious thing, however, that our medical laws seem unable to cope with quacks, but if a man who has had a regular training has not obtained his license, he is immediately hauled up and fined.

The King's Illness.

I fear I have trespassed on your time long enough, and I must bring this rather disconnected address to a close. I cannot, however, close without referring to the comparatively recent serious illness of our beloved Sovereign. The result in his case is most satisfactory and is a triumph for modern surgery; let all credit be given to the able and wise physicians and surgeons who directed his case. The rewards of the medical profession are not many, nor are they of the highest grade, but in the

late award of honours medical men were not forgotten, and those in closest attendance on the King received their share. The responsibilities attaching to the medical attendents were more than usual, and very much depended on their advice as to the most proper and safest procedure. The proper path was chosen and for the time they are praised beyond measure, but unfortunately medical favours are soon forgotten.

"Three faces the Phisition hath;
"First as an Angel he,
"When he is sought; next when he helpes
"A God he seems to be;
"The best of all, when he hath made
"The Sicke, diseased well
"And asks his guerdon, then he seems
"An oughly Fiend of Hell."

The future of the medical men, however, is bright, and his position in the State is advancing as the necessity for employing him for the solution of all hygienic and sanitary problems becomes evident. In the wars of the future the winning of battles will be of no avail or impossible without an efficient medical service and no government will be complete without a department of public health presided over by medical men.

To enable our profession to obtain the respect and consideration of the public, we must stand shoulder to shoulder, and be true to ourselves. We must not coquette with anything that has even the appearance of quackery. We must work for the love of our profession, and not for the mere object of getting money. We must neglect no opportunities of meeting together and so increasing our knowledge and stimulating our desire for knowledge. Above all, we must see that in the future none but men of the highest character, and who have had a proper preliminary training be allowed to enter into the profession of medicine.

Obituary.

Since we last met we have lost several valuable members; two especially will be missed, namely, Wyatt G. Johnston, of Montreal, and Wm. S. Muir, of Truro. Dr. Johnston, one might say, died on the battle-field, for he succumbed to sepsis contracted in his ordinary work. He had just been appointed the Professor of hygiene and State Medicine in McGill University, and a long and successful occupation of the chair was hoped for. He had done much original work already as assistant professor, and in pathology he had made a world-wide reputation. Wyatt Johnston was in some respects a genius—he had the modesty, great originality and capacity for work, which distinguishes such men. He was, if anything, too fertile in ideas, and had so many ventures on the

sea of experiment, that some of them necessarily came to grief; not because they were Utopian or impracticable, but because there was not time to work them out. At the Montreal General Hospital he had the confidence and love of his colleagues and his opinion was final on a pathological question. As an expert in the coroner's court he was looked upon as a safe authority and his evidence was never prejudicial and partisan, but was, as scientific evidence ought to be, impartial. He much impressed judges and lawyers with his honesty, sincerity and accurateness. We only occasionally find such men, but in their short lives they often accomplish more than many others who have exceeded the prescribed threescore years and ten.

William Scott Muir has also gone from amongst us. His cheerful countenance and portly form we miss here to-day; he was one who had for many years past regularly attended these meetings, and by his genial disposition and practical common sense endeared himself to all with whom he came in contact. He was a man of affairs and took the greatest interest in everything pertaining to the advancement of the profession; he was always wise in counsel and in scientific discussion had the faculty of going to the root of the matter and stripping the subject of unnecessary accessories. He was an able practitioner and much beloved by his patients. He gained their confidence by his transparent honesty and was always welcomed by his colleagues wherever he went and always found friends. He was a distinct personality and one the medical profession can ill afford to lose—his works will follow him.

Dr. Brunelle, surgeon of the Hotel Dieu Hospital, has also been suddenly removed from among us. He was an able surgeon and teacher, and will be much missed by his colleagues by whom he was held in the highest regard.

ADDRESS IN SURGERY TO THE CANADIAN MEDICAL ASSOCIATION.

THE CONTRIBUTION OF PATHOLOGY TO SURGERY.

By JOHN STEWART, M.B., C.M., Edin., Halifax, N.S.

Examiner in Surgery, Dahousie University.

THERE is no finer chapter in the history of our race than that which deals with the exploits of the early navigators of the fifteenth and sixteenth centuries. The sea was not then what it is now, mapped and measured, and marked by innumerable highways of travel. It was a dim mysterious realm, with unknown bounds, little more was known of its nature than when Homer sang, with a grand vagueness, of the Streams of Ocean.

And yet, from Palos or from Bristol men set forth urged by the deathless yearning of the human heart to know and to do, with no guide but the scanty scraps of experience, and their own hardy resolution, without sextant, without chronometer, without log-book, without chart, they sailed out into the vast unknown, unmeasured, unsounded sea, fearing, but daring mystery, and hoping for the Hesperides.

The seamanship of those heroes was perfect, their navigation, their knowledge of the principles which lay at the foundation of their art, their equipment in all that is now deemed essential, was crude and rudimentary. How could it be otherwise when Newton was yet unborn, when the old Ptolemaic theory of the universe still held sway, and at a time when success and failure were attributed to the benign or baleful influences of the stars by which they sought to guide their course?

Long and slow was the progress of their science, centuries were to pass before their dreams came true, many and various were the sources from which help came, and even to-day there are problems unsolved, and a still elusive goal.

Nothing is more striking in the evolution of nautical science than the marvellous development of the last century, due chiefly to the introduction of steam as a motive power. It has created a new epoch.

I knew an old sea-captain who told me that when he was an apprentice he sailed one winter morning in a brig called the "Westmoreland" from Belfast, bound out to St. John, N.B., "And," said the old man, "after boxing about the Western Ocean for one hundred and forty days we brought up in Cork harbour." Compare such a contingency with a voyage in such a ship as the "Oceanic," which leaves her dock with the punctuality of clockwork, a scarcely greater punctuality than that with which she arrives in dock on the other side of the Atlantic.

The contributors to this wonderful advance may be divided into two classes. There was the practical sailor, quick to observe, ready to act, full of resource, with all

> "The virtues which his perilous life
> Extracts from Nature's elemental strife."

And there was the philosopher, the man of reflection, who pondered the reports of these adventurers in strange seas and under new skies, and sought for explanations of mystery, who followed Learning for her own dear sake, and counted himself happy if only he might know the causes of phenomena and evolve a Cosmos from seeming chaos.

A parallel, not altogether fanciful, may be drawn between those pioneers of ocean travel and the early masters of our craft. Those made their way through the uncertain world of waters, very synonym of change and unrest, guided on the one hand by their own hard-won experience and the traditions of their fathers, and on the other by the application of principles laid down by men who made a philosophic study of Nature, who searched into the secret of the sea, who built up the Sciences o Astronomy, Geography and Hydrography.

And these worked in the sphere of the human organism, mysterious, intricate, inexplicable, and they too worked on two lines, the long and weary and often fallacious track of Empiricism, and the ampler but often disconnected road constructed by those whose chief aim was, in the words of him who led the vanguard, "to study and search out the secrets of Nature."

There was a Cosmography—of a kind—and methods of measuring space and time before Copernicus and Tycho Brahe, and there must have been some sort of a pathology, some notion of the nature of the morbid processes in the mind of the first prehistoric surgeon who plugged a wound or opened an abscess. The troglodyte surgeon must have had some notion why he chipped holes in his patient's skull.

But was the lore of the medieval mariner, regarding the earth as a fixed expanse around which the heavenly bodies wheeled, casting a horoscope to secure a favorable voyage, sailing a wonder-sea of mystery and portent, anchoring to the Kraken's rugged side and being well acquainted with the Mermaid, more unscientific than that of his brother the surgeon? What a limbo of fantastic and irrational notions filled the minds of our colleagues of the Middle Ages! Yes, even of men who lived a century ago and whose voices still have power.

It is difficult for us tc realize the strange notions of a time when the ancient humoral pathology in a very solidist manner, still projected itself into the vortex of the Renaissance, when honoralist and solidist rose, struggled and sank, to reappear in new disguises as they do to this day,

when the vitalist imagined his "Archaeus," when skilled clinicians considered scabies a typical dyscrasia, and when a keen and cultured mind could believe in the "*pulvis sympatheticus*," and when the grotesque philosophy of Paracelsus with its strange fore-gleams of latter day truth, held sway. Medieval pathology is like a dark and troubled sea where gleams of truth shine pale through wildering mists and where conflicting currents seethe and boil—"dark fluxion—all unfixable by thought."

And what Navigation was to Seamanship, Pathology is to Surgery.

Advance in nautical science was conditioned by the advance in the study of natural phenomena, by invention of instruments of precision, and the application of these to the purposes of the mariner. From China came the mariner's compass; from Nuremburg came the watch, precursor of the chronometer; from Flanders came Mercator with his charts; Scotland sent Napier with his logarithms; England supplied Hadley and the sextant; and the fore-runner of the Nautical Almanac—the mariner's vade mecum—in the shape of the first Almanac, came from Poland.

And nothing is clearer than that progress of surgery depended on the study of vital phenomena and the application of the results of these studies and of new methods to the problems of disease and injury.

The pyrotechnics of Paracelsian dreamery were still blazing on the dim coasts of the old-world pathology when the morning star of the new era appeared in the person of the first real anatomist Versalius, and day dawned with William Harvey, the Columbus of modern medicine. Harvey led the way in the application of experimental methods to biological questions. The result of his great discovery was a complete change in pathological ideas, and a new school of pathology soon arose under the guidance of the famous Boerhaave at Leyden. He, impressed by the study of the physics of the circulation, and aided by the discovery of the capillary system by Malpighi, and of the red corpuscles of the blood by Swammerdam and Lewenhoek, initiated the study of the local changes in diseased parts, and soon the first text-book of general pathology was brought out by Gaubius, distinctly biological in its view, and having for its text the maxim of Boerhaave "*Morbus est vita praeter naturam.*"

It was under the influence of these views and the new methods of study that Morgagni produced his epoch-making book, "*De Sedibus et Causis morborum*," of which Virchow says, "it was the first time that the sum total of actual knowledge of the material alterations which disease occasions in the body, was brought before the world."

With this, pathological anatomy began and the way was prepared for John Hunter. He it was who introduced the experimental method into the study of disease; and, by virtue of his intuitive genius, his amazing capacity for work, and his practical applications of the results

of his researches, has well earned the title *Father of Scientific Surgery.* "From the time of Hunter to the present time" says Billroth, "English Surgery has had something of grandeur and style about it."

In the vast field of subjects which Hunter explored it is difficult to single out any one for pre-eminence. But it is undoubtedly on the score of his celebrated operation for popliteal aneurysm that he is generally known as a practical surgeon. Mr. Butlin, in his interesting Cavendish Lecture, tells us, not without a stroke of humour, of the great expectations he had formed of interesting instances of the direct influences of pathological study on practical surgery, and how he found absolutely nothing of the sort in the history of medicine until he came to Hunter's operation, which he calls "the *one* example, the *only* example, up to that time, of deliberate surgical invention founded on the study of pathology by the man who made the invention."

But it is not in particular instances only, in improved methods of diagnosis, in aids to operative surgery, that the contribution of pathology is found. It is rather in the new principles gained, and in the new attitude towards nature and phenomena, that pathology has ennobled Surgery.

Hunter helped us to understand our power of interrogating nature, of interpretating her answer, and our power of applying the knowledge so gained to the practicable problems of our art. This was the beginning of Scientific Surgery, but much remained to be done, and it is noteworthy that the chief actors in the movement now were among the surgeons. Who can estimate the value of the impetus given to pathology by Xavier Bichat in his studies of the tissues, or of Andral in his haematopatho'ogy? After Bichat came Dupuytren, the practical surgeon, and in England Charles Bell revolutionised our theories of the Nervous System.

The next great advance was to arise from a study of plant life, and the researches of Schwann and Schleiden paved the way for the Cellular Pathology of Virchow—the basis of our present system of pathology.

And a shadow falls upon us gathered here as we realize that the Veteran Master, the undisputed leader of pathological thought and progress for over fifty years, has fallen, and we unite in the desire to lay our spray of cypress on the tomb of him whom we all considered the greatest German of our time.

But with all these new acquisitions, the exact anatomical knowledge, the clearer views of morbid action, there was still for the surgeon an unexplored sea of mystery. The pathologist went on his way rejoicing in his rapidly increasing store of knowledge, the surgeon still lingered, with anxious mind and heavy heart, for the question of questions to him was still unanswered.

The healing of wounds was the Enigma of Surgery, and the characteristic difficulty was the uncertainty attaching to the healing process. Here a wound healed quietly and soundly, without pain and without causing constitutional disturbance, and there it became inflamed, suppurated for weeks, causing intolerable anguish and exhausting the patient. Why the difference? Why so much more danger from the thrust of a pike than the stroke of a sabre? Why should a fracture of the leg, in which a splinter of bone had cut through the skin, be so much dreaded, while multiple simple fractures were seldom dangerous to life? Why was the peritoneum virtually a closed door to the surgeon's desires? Why did the implication of a joint add so terribly to the danger of a penetrating wound? Who can estimate the amount of anxious thought that has been given to this subject, who can gauge the disappointment that resulted from the application of so many theories? Empiricism was at its wits' end. Cold lotions and warm poultices, stimulating liniments and soothing ointments, wet dressings and dry, no dressings at all—all had their advocates, their occasional successes and their inevitable failures. The only certainty in the whole sad field was the certainty of failure, the certainty that however brilliant a series of cases a surgeon might have, it was sure to be broken some day, for some inexplicable reason. We can only wonder at the marvellous correctness of some of the guesses at truth that were made, and admire the results which were sometimes attained by men who would almost appear to have had an intuitive, if unconscious, knowledge of the truth. Witness, for instance, the extraordinary results of Alanson at the Royal Infirmary of Liverpool in the beginning of last century. And mark that Alanson was a pupil of John Hunter.

The idea of *Materies Morbi* is a very old one, and doubtless the idea that this might be a species of living matter is also old. The notion of the parasitism of disease crops up repeatedly in the history of pathology. Monti, in his " fundamental data of modern pathology " claims for his fellow countryman Agostino Bassi, the distinction of being the founder of the doctrine of pathogenic microbes.

However this may be, it is certain that by the close of the eighteenth century this conception was present in the minds of many scientific workers.

It was reserved for Schönlein to prove in 1839 that the disease known as tinea, and considered as a typical " humoral " disease and not only so but hereditary, was really due to the growth of a fungus.

About fifty years ago Davaine and Chauveau proved that the disease known as anthrax was caused by the presence of an organism discovered in the blood of affected animals by Pollender in 1849.

The mists of conjecture were condensing and trickling into clear tiny rivulets, and soon these were collected by the genius of Pasteur into the grand fountain-head of the mighty stream of bacteriology. But the practical surgeon had gained nothing towards the elucidation of his enigma. Perhaps at no time was their greater helplessness in the treatment of wounds. The advance in methods of diagnosis and improved methods of operating, introduced by such men as Syme and Nelation, and other brilliant surgeons of the period, and the great discovery of anaesthesia, had stimulated operators to increased activity. But the surgeon and his patient seemed the sport of a capricious fate. Epidemics of septic fever, pyaemia, hospital gangrene and erysipelas decimated hospital wards and often attacked fifty per cent of all operation cases, and hospitals were being closed. Surely surgery was suffering eclipse.

Then came Lister, and the dark hemisphere rolled in one grand movement from its age-long penumbra into noonday. Surgery —modern surgery—was born. In the chronology of our craft time is divided into before and after Lister. The shadows of fear, anxiety and uncertainty left the surgeon's face, for now that

"Wise, rare smile was sweet with certainties."

It is a fascinating thing to trace the history of a great discovery, and when the time comes to write the history of the Listerian Renaissance, it will be found the romance of surgery.

"The great artist" says Amiel, "is a simplifier." "art is simply the bringing into relief of the obscure thought of nature; a simplication of the lines, a falling into place of groups otherwise invisible. The fire of inspiration brings out, as it were, designs traced before hand in sympathetic ink. The mysterious grows clear, the confused plain; what is complicated becomes simple, what is accidental, necessary. Every ideal is the key of a long enigma." Listers ideal fitted the key to the enigma of surgery.

I do not know that we are yet in a position to understand the profound change which this ideal brought into pathology. We cannot yet find a proper perspective, to view the work of him who is in surgery what Newton was in physics, "that master mind to which" as Pearce Gould says, "we owe the greatest impetus that surgery has ever felt."

As the new system was developed step by step with irresistable logic and exact experiment, what illimitable vistas opened up before the surgeon, what realms undreamed of before.

"Then felt I like some watcher of the skies
When a new planet swims into his ken;
Or like stout Cortes when with eagle eyes
He stared at the Pacific—and all his men
Look'd at each other with a wild surmise—
Silent, upon a peak in Darien."

Lister, like Hunter, united in himself the pathologist and the surgeon, and like him he worked on the lines of Harvey and " searched out the secrets of nature by way of experiment." The greatest contribution of pathology to surgery is through experimental surgery.

I have already had the honor of bringing before this Association some of the grounds on which we claim Lister as a great pathologist. His work on inflamation, on the Coagulation of the Blood, and on the action of the Nervous System, as a powerful factor in pathological processes, has been of direct and inestimable value to surgery, apart from his Magnum Opus. I will now indicate some of the ways in which the patho'ogical researches of others have directly influenced surgery. I shall choose three great departments of operative surgery.

The old operation for popliteal aneurysm was to tie the vessel on either side of the tumor, cut it open, turn out the clot and allow the wound to heal by suppuration. The mortality was very high, the usual cause of death being secondary haemorrhage from the proximal ligature cutting its way through the artery. The current pathology of aneurysm, founded mainly on some observations of Haller, ascribed aneurysm to a weakening of the vessel wall. Hunter came to the conclusion, from clinical and *post mortem* study that aneurysm was due to disease of the arterial coats. But he was not content to think so. He experimented on the dog and found that mere weakening of the vessel by removal of portions of its outer walls did not lead to aneurysm. He proposed to tie the artery high up where it was healthy, arguing that the current in the artery being thus shut off, pressure in the aneurysm would cease, and coagulation would take place; also that the collateral circulation would be sufficient to keep up the vitality of the limb without causing appreciable reflux into the sac. And what of the tumor itself? Instances had been recorded by Valsalva and others of the disappearance of aneurysmal tumors which had undergone spontaneous cure, and whether Hunter was aware of this or not he seems to have trusted to absorption for the removal of the solidified contents of the sac, and we all know the brilliant success that proved his reasoning true.

A more modern instance of an operation conceived in the same spirit is afforded in the first nephrectomy, by Gustav Simon of Heidelberg. A patient came under his care suffering from a ureteral fistula. In the sixties probably no surgeon had yet dreamed of ureteral anastomosis and removal of the kidney seemed to offer the only chance of cure. But was the operation feasible?

It must have been long known, thanks to morbid anatomy, that one kidney might be destroyed by disease and the patient yet remain healthy.

It was a quite different matter to remove a kidney by operation without any opportunity for compensatory changes to take place. But experimental pathology had furnished proof in the hands of Zambeccarius that, in the dog, one kidney might be removed, without appreciable injury to health. Simon repeated these experiments. He learned that the chief danger was from peritonitis, that there was not much fear of haemorrhage, that uraemia was not to be dreaded, that neither albuminuria nor cardiac hypertrophy followed, and that compensatory hypertrophy occurred in the remaining kidney. And so in 1869 he removed the kidney and succeeded in curing his patient of her distressing malady.

Few things would have amazed and delighted John Hunter more than the recent developements in Brain Surgery, and especially the steps by which the perilous ascent was gained. Diseased brains have been examined since the time of Margagni, but it was the genius of Broca which first pointed to a *sedes morbi* for aphasia. The same fortunate blending of clinical acumen with exact morbid anatomy enabled Hughlings Jackson to extend our knowledge of the dependence of intercranial diseases on local alteration of structure. But it was necessary to have the irrefutable proofs afforded by the experiments of Fritsch and Hitzig and of Ferrier, before the surgeon could project his chart of cerebral surgery, and sail for the island of Reil.

Now it is evident that I need not weary you by going into further details to show how pathology in its various departments of morbid anatomy, etiology, chemical, microscopic and experimental pathology has contributed to the advance of surgery. Every day brings new evidence.

Our understanding of morbid processes has been and is still being enlightened, our power of diagnosis is increased, and our ability to cope with disease and injury is extended.

It is often said that the foundation of surgery is anatomy and this is true in a sense, for anatomy is the first step in pathology. A knowledge of anatomy is absolutely essential to the study of the human body. But anatomy deals with dead matter, pathology with living, if morbid, activities. Anatomy is finite, but pathology, as the permutations which may occur in anatomical elements, is infinite, and it is the realm which the surgeon must explore who wishes to have a firm grasp of the principles of his art. Much has been learned but more lies waiting discovery. There is always another "peak in Darien" and many surmises to make sure.

Navigation owes much to the various institutes founded to further its study. Who can tell the value of the early naval schools in Spain, or of the Greenwich Observatory? And so if pathology is to flourish provision must be made for its study. Every hospital should have its Pathological Institute.

And here we know we shall find ourselves in collision with that section of the public to whom science is uncongenial and medical science an abomination. Pathological study may not always seem interesting or profitable. The ancient mariners would have smiled to think the Tuscan artist with his optic glass could be of any benefit to him, and perhaps Galileo was thinking more of descrying new lands, rivers and mountains in the moon than of assisting the sailor, nevertheless he was helping to lay the foundation of the Science which was to make the modern sailor's work possible.

And when the father of our own illustrious Lister, applying his knowledge to the physical and chemical characters of glass, perfected our achromatic microscope there were practical surgeons who would certainly have failed to see any bearing which his work had on theirs.

When watches were first made in Nuremburg, the only thought in the maker's mind, probably, was the accurate registration of the passing of time. But Gemma, the Italian, intent on perfecting methods of navigation, seized the idea of the watch at once as a means of computing longitude and led the way to the use of the chronometer. And the gain is not necessarily all one way, for the practical surgeon, making careful clinical records, may furnish the pathologist with new ideas, and if one may wrest the words from their original meaning he.

> "Doomed to go in company with Pain,
> And Fear and Bloodshed, miserable train,
> Turns his necessity to glorious gain."

and may help to introduce new forces into the healing art.

Here in Canada, while we have had ample experience of the anti-vaccinationist, we have scarcely made the acquaintance of his colleague the anti-vivisectionist. But the sign of the times indicate that full scope will soon be given to his vituperative faculty, for in the Universities of McGill and Toronto pathological research has fairly started on its way.

If we cannot however 'mollify the spirit of captious contradictors," we may perhaps deprive them of an audience by teaching the public that those who devote their time to the investigation of disease and who may sometimes find it necessary for the elucidation of the problems submitted to them, to inflict pain on animals, may be lightening the burden of humanity as well as he who directly mitigates its pains, and that their work may be regarded like that of every conscientious, surgeon, as a sacred duty, a responsible task, carried out "As ever in the great Task-Master's eye."

CHAUVINISM* IN MEDICINE.†

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A RARE and precious gift is the art of detachment, by which a man may so separate himself from a life-long environment as to take a panoramic view of the conditions under which he has lived and moved, and that frees him from Plato's den long enough to see the realities as they really are, the shadows as they appear. Could a physician attain to such an art he would find in the state of his profession a theme calling as well for the exercise of the highest faculties of description and imagination as for the deepest philosophic insight. With wisdom of the den only and of my fellow-prisoners, such a task is beyond my ambition and my powers, but to emphasize only the subject that I wish to bring home to your hearts I must first refer to certain distinctive features of our profession :—

1. FOUR GREAT FEATURES OF THE GUILD.

Its noble ancestry.—Like everything else that is good and durable in this world, modern medicine is a product of the Greek intellect, and had its origin when that wonderful people created positive or rational science, and no small credit is due to the physicians who, as Professor Gomperz remarks (in his brilliant chapter "On the Age of Enlightenment," *Greek Thinkers*, Vol. 1), very early brought to bear the spirit of criticism on the arbitrary and superstitious views of the phenomena of life. If science was ever to acquire "steady and accurate habits instead of losing itself in a maze of phantasies, it must be by quiet methodical research." "It is the undying glory of the school of Cos that it introduced this innovation into the domain of its Art, and thus exercised the most beneficial influence on the whole intellectual life of mankind. Fiction to the right! Reality to the left! was the battle cry of this school in the war it was the first to wage against the excesses and defects of the nature philosophy" (Gomperz). The critical sense and skeptical attitude of the Hippocratic school laid the foundations of modern medicine on broad lines, and we owe to it: *first*, the emancipation of medicine from the shackles of priestcraft and of caste; *secondly*, the conception of medicine as an art based on accurate observation, and as a science, an integral part of the science of man and of nature; *thirdly*, the high moral ideals, expressed in that most "memorable of human documents" (Gomperz), the Hippocratic

*Definition: A narrow, illiberal spirit in matters national, provincial, collegiate or personal.

†An Address in Medicine, (delivered before the Canadian Medical Association, Montreal, Sept 17th, 1902.)

oath; and *fourthly*, the conception and realization of medicine as the profession of a cultivated gentleman.* No other profession can boast of the same unbroken continuity of methods and of ideals. We may indeed be justly proud of our apostolic succession. Schools and systems have flourished and gone, schools which have swayed for generations the thought of our guild, and systems that have died before their founders; the philosophies of one age have become the absurdities of the next, and the foolishness of yesterday has become the wisdom of to-morrow; through long ages which were slowly learning what we are hurrying to forget; amid all the changes and chances of twenty-five centuries, the profession has never lacked men who have lived up to these Greek ideals. They were those of Galen and of Aratæus, of the men of Alexandrian and Byzantine schools, of the best of the Arabians, of the men of the Renaissance, and they are ours to-day.

A second distinctive feature is the *remarkable solidarity*. Of no other profession is the word universal applicable in the same sense. The celebrated phrase used of the Catholic Church is in truth much more appropriate when applied to medicine. It is not the prevalence of disease or the existence everywhere of special groups of men to treat it that betokens this solidarity, but it is the identity throughout the civilized world of our ambitions, our methods and our work. To wrest from nature the secrets which have perplexed philosophers in all ages, track to their sources the cause of disease, to correlate the vast stores of knowledge, that they may be quickly available for the prevention and cure of disease—these are our ambitions. To carefully observe the phenomena of life in all its phases, normal and perverted, to make perfect that most difficult of all arts, the art of observation, to call to aid the science of experimentation, to cultivate the reasoning faculty, so as to be able to know the true from the false—these are our methods. To prevent disease, to relieve suffering and to heal the sick—this is our work. The profession in truth is a sort of guild or brotherhood, any member of which can take up his calling in any part of the world and find brethren whose language and methods and whose aims and ways are identical with his own.

Thirdly, *its progressive character*.—Based on science, medicine has followed and partaken of its fortunes, so that in the great awakening which has made the nineteenth memorable among centuries, the profes-

*Nowhere in literature do we have such a charming picture illustrating the position of a cultivated physician in society as that given in Plato's Dialogues of Eryximachus, himself the son of a physician, Acumenus. In that most brilliant age the physician was the companion and friend, and in intellectual intercourse the peer of its choicest spirits.

sion received a quickening impulse more powerful than at any period in its history. With the sole exception of the mechanical science, no other department of human knowledge has undergone such a profound change —a change so profound that we who have grown up in it have but slight appreciation of its momentous character. and not only in what has been actually accomplished in unravelling the causes of disease, in perfecting methods of prevention and in wholesale relief of suffering, but also in the unloading of old formulæ and in the substitution of the scientific spirit of free enquiry for cast-iron dogmas we see a promise of still greater achievement and of a more glorious future.

And lastly, the profession of medicine is distinguished from all others by *its singular beneficence.* It alone does the work of charity in a Jovian or God-like way, dispensing with free hand truly Promethean gifts. There are those who listen to me who have seen three of the most benign endowments granted to the race since the great Titan stole fire from the heavens. Search the scriptures of human achievement and you cannot parallel in beneficence Anæsthesia, Sanitation, with all that it includes, and Asepsis—a short half-century's contribution towards the practical solution of the problems of human suffering, regarded as eternal and insoluble. We form almost a monoply or trust in this business. Nobody else comes into active competition with us, certainly not the other learned professions which continue along the old lines. Every few years sees some new conquest, so that we have ceased to wonder. The work of half-a-dozen men, headed by Laveran, has made waste places of the earth habitable and the wilderness to blossom as the rose. The work of Walter Reed and his associates will probably make Yellow Fever as scarce in the Spanish Main as is typhus fever with us. There seems to be no limit to the possibilities of scientific medicine, and while philanthropists are turning to it as to the hope of humanity, philosophers see, as in some far-off vision, a science from which may come in the prophetic words of the Son af Sirach, " Peace over all the earth."

Never has the outlook for the profession been brighter. Everywhere the physician is better trained and better equipped than he was twenty-five years ago. Disease is understood more thoroughly, studied more carefully and treated more skilfully. The average sum of human suffering has been reduced in a way to make the angels rejoice. Diseases familiar to our fathers and grandfathers have disappeared, the death rate from others is falling to the vanishing point, and public health measures have lessened the sorrows and brightened the lives of millions. The vagaries and whims, lay and medical, may neither have diminished in number nor lessened in their capacity to distress the faint hearted who do not appre-

ciate that to the end of time people must imagine vain things, but in the light of the colossal advances of the past fifty years, what are they but flies on the wheels of progress ?

So vast, however, and composite has the profession become, that the physiological separation, in which dependent parts are fitly joined together, tends to become pathological, and while some parts suffer necrosis and degeneration, others, passing the normal limits, become disfiguring and dangerous outgrowths on the body medical. The dangers and evils which threaten harmony among the units, are internal, not external. And yet, more than in any other profession, owing to the circumstances of which I have spoken, is complete organic unity possible. Of the many hindrances in the way time would fail me to speak, but there is one aspect of the question to which I would direct your attention in the hope that I may speak a word in season.

Perhaps no sin so easily besets us as a sense of self-satisfied superiority to others. It cannot always be called pride, that master sin, but more often it is an attitude of mind which either leads to bigotry and prejudice or to such a vaunting conceit in the truth of one's own beliefs and positions, that there is no room for tolerance of ways and thoughts which are not as ours are. To avoid some smirch of this vice is beyond human power; we are all dipped in it, some lightly, others deeply grained. Partaking of the nature of uncharitableness, it has not the intensity of envy, hatred and malice, but it shades off in fine degrees from them. It may be a perfectly harmless, even an amusing trait in both nations and individuals, and so well was it depicted by MM. Cogniard in their play, *La Cocarde Tricolore*, 1831, one character in which was the young recruit Chauvin, that the name Chauvinism has become a by-word, expressing a bigoted, intolerant spirit.* The significance of the word has been widened, and it may be used as a synonym for a certain type of nationalism, for a narrow provincialism or for a petty parochialism. It does not express the blatant loudness of Jingoism, which is of the tongue, while Chauvinism is a condition of mind, an aspect of character much more subtle and dangerous. The one is more apt to be found in the educated classes, while the other is pandemic in the fool multitude—"that numerous piece of monstrosity which, taken asunder, seem men and reasonable creatures of God, but confused together, make but one great beast, and a monstrosity more prodigious than Hydra" (Religio Medici). Wherever found, and in whatever form, Chauvinism is a great enemy of progress and of

* It is by no means easy to see, after reading the play, how the name could have arisen. The nationalism displayed is of a most harmless type. In the sense here employed it has been used by standard writers, as for example, Huxley.

peace and concord among the units. I have not the time, nor had I, have I the ability to portray this failing in all its varieties; I can but touch upon some of its aspects, national, provincial and parochial.

II NATIONALISM IN MEDICINE.

Nationalism has been the great curse of humanity. In no other shape has the Demon of Ignorance assumed more hideous proportions; to no other obsession do we yield ourselves more readily. For whom do the Hosannas ring higher than for the successful butcher of tens of thousands of poor fellows who have been made to pass through the fire to this Moloch of nationalism? A vice of the blood, of the plasm rather, it runs riot in the race, and rages to-day as of yore in spite of the precepts of religion and the practice of democracy. Nor is there any hope of change; the pulpit is dumb, the press fans the flames, literature panders to it and the people love to have it so. Not that all aspects of nationalism are bad. Breathes there a man with soul so dead that it does not glow at the thought of what the men of his blood have done and suffered to make his country what it is? There is room, plenty of room, for proper pride of land and birth. What I inveigh against is a cursed spirit of intolerance, conceived in distrust and bred in ignorance, that makes the mental attitude perennially antagonistic, even bitterly antagonistic to everything foreign, that subordinates everywhere the race to the nation, forgetting the higher claims of human brotherhood.

While medicine is everywhere tinctured with national characteristics, the wider aspects of the profession, to which I have alluded—our common lineage and the community of interests—should always save us from the more vicious aspects of this sin, if it cannot prevent it altogether. And yet I cannot say, as I wish I could, that we are wholly free from this form of Chauvinism. Can we say, as English, French, German or American physicians, that our culture is always cosmopolitan, not national, that our attitude of mind is always as frankly open and friendly to the French as to the English, to the American as to the German, and that we are free at all times and in all places from predjudice, at all times free from a self-satisfied feeling of superiority the one over the other? There has been of late years a closer union of the profession of the different countries through the International Congress and through the international meetings of the special societies; but this is not enough, and the hostile attitude has by no means disappeared. Ignorance is at the root. When a man talks slightingly of the position and work of his profession in any country, or when a teacher tells you that he fails to find inspiration in the work of his foreign colleagues, in the words of the Arabian proverb—he is a

fool, shun him! Full knowledge, which alone disperses the mists of ignorance, can only be obtained by travel or by a thorough acquaintance with the literature of the different countries. Personal, first-hand intercourse with men of different lands, when the mind is young and plastic, is the best vaccination against the disease. The man who has sat at the feet of Virchow, or has listened to Traube, or Helmotz, or Cohnheim, can never look with unfriendly eyes at German medicine or German methods. Who ever met with an English or American pupil of Louis or of Charcot, who did not love French medicine, if not for its own sake, for the reverence he bore his great master? Let our young men, particularly those who aspire to teaching positions, go abroad. The can find at home laboratories and hospitals as well equipped as any in the world, but they may find abroad more than they knew they sought—widened sympathies, heightened ideals and something perhaps of a *Welt-cultur* which will remain through life as the best protection against the vice of nationalism.

Next to a personal knowledge of men, a knowledge of the literature of the profession of different countries will do much to counteract intolerance and Chauvinism. The great works in the department of medicine in which a man is interested, are not so many that he cannot know their contents, though they be in three or four languages. Think of the impetus French medicine gave to the profession in the first half of the last century, of the debt we all owe to German science in the latter half, and the lesson of the practical application by the English of sanitation and asepsis! It is one of our chief glories and one of the unique features of the profession that no matter where the work is done in the world, if of any value it is quickly utilized. Nothing has contributed more to the denationalization of the profession of this continent than, on the one hand, the ready reception of the good men from the old countries who have cast in their lot with us, and, on the other, the influence of our young men who have returned from Europe with sympathies as wide as the profession itself. There is abroad among us a proper spirit of eclecticism, a willingness to take the good wherever found, that augurs well for the future. It helps a man immensely to be a bit of a hero-worshipper, and the stories of the lives of the masters of medicine do much to stimulate our ambition and rouse our sympathies. If the life and work of such men as Bichat and Laennec will not stir the blood of a young man and make him feel proud of France and of Frenchmen, he must be a dull and muddy mettled rascal. In reading the life of Hunter, of Jenner, who thinks of the nationality which is merged and lost in our interest in the man and in his work? In the halcyon days of the Renaissance there was no nationalism in medicine, but a fine catholic spirit made great

leaders like Vesalius, Eustachius, Stenson and others at home in every country in Europe. While this is impossible to-day, a great teacher of any country may have a world-wide audience in our journal literature, which has done so much to make medicine cosmopolitan.

III. Provincialism in Medicine.

We may congratulate ourselves that the worst aspects of nationalism in medicine are disappearing before the broader culture and the more intimate knowledge brought by ever-increasing intercourse, yet conditions have favoured in English-speaking countries the growth of a very unpleasant sub-variety, which may be called provincialism or sectionalism. In one sense the profession of this continent is singularly homogeneous. A young man may be prepared for his medical course in Louisiana and enter McGill College, or he may enter Dalhousie College, Halifax, from the State of Oregon, and in either case he will not feel strange or among strangers, so soon as he has got accustomed to his environment. In collegiate life there is a frequent interchange of teachers and professors between all parts of the country. To better his brain the scholar goes freely where he wishes—to Harvard, McGill, Yale, or Johns Hopkins; there are no restrictions. The various medical societies of the two countries are, without exception, open to the members of the profession at large. The President of the Association of American Physicians this year (Dr. James Stewart), is a resident of Montreal, which gave also last year, I believe, presidents to two of the special societies. The chief journals are supported by men of all sections. The text-books and manuals are everywhere in common; there is, in fact, a remarkable homogenicity in the English-speaking profession, not only on this continent but throughout the world. Naturally in widely scattered communities, sectionalism—a feeling or conviction that the part is greater than the whole—does exist, but it is diminishing, and one great function of the national associations is to foster a spirit of harmony and brotherhood among the scattered units of these broad lands. But we suffer sadly from a provincialism which has gradually enthralled us, and which sprang originally from an attempt to relieve conditions insupportable in themselves. I have praised the unity of the profession of this continent, in so many respects remarkable, and yet in another respect it is the most heterogeneous ever known. Democracy in full circle touches tyranny, and as Milton remarks, the greatest proclaimers of liberty may become its greatest engrossers (or enslavers). The tyranny of labour unions, of trusts and of an irresponsible press may bear as heavily on the people as imperialism in its worst form. And, strange irony of fate! the democ-

racy of Provincial and State Boards has imposed in a few years a yoke more grievous than that which afflicts our brethren in Great Britain, which took generations to forge.

The delightful freedom of intercourse of which I spoke, while wide and generous, is limited to intellectual and social life, and on the practical side, not only are genial and courteous facilities lacking, but the bars of a rigid provincialism are put up, fencing each state as with a Chinese wall. In the Dominion of Canada there are eight portal entries to the profession, in the United States almost as many as there are States, in the United Kingdom nineteen, I believe, but in the latter the license of any one of these bodies entitled a man to registration anywhere in the kingdom. Democracy in full circle has reached on this hemisphere, a much worse condition than that in which the conservatism of many generations has entangled the profession of Great Britain. Upon the origin and growth ot the Provincial and State Boards I do not propose to touch. The ideal has been reached so far as organization is concerned, when the profession elects its own Parliament, to which is committed the control of all matters relating to the license. The recognition, in some form, of this democratic principle, has been one of the great factors in elevating the standard of medical education, and in a majority of the States of the Union it has secured a minimum period of four years study, and a State Examination for License to Practice. All this is as it should be. But it is high time that the profession realized the anomaly of eights boards in the Dominion and some scores in the United States. One can condone the iniquity in the latter country more readily than in this, in which the boards have existed for a longer period, and where there has been a greater uniformity in the medical curriculum. After all these years that a young man, a graduate of Toronto and a registered practitioner in Ontario, cannot practice in the Province of Quebec, his own country, without submitting to vexatious penalties of mind and pocket, or that a graduate from Montreal and a registered practitioner of this province cannot go to Manitoba, his own country again, and take up his life's work without additional payments and penalities, is, I maintain, an outrage; it is provincialism run riot. That this pestiferous condition should exist through the various provinces of this Dominion and so many States of the Union, illustrates what I have said of the tyranny of democracy and how great enslavers of liberty its chief proclaimers may be.

That the cure of this vicious state has to be sought in Dominion bills and National examining boards, indicates into what debasing depths of narrow provincialism we have sunk. The solution seems so simple, particularly in this country, with its uniformity of methods of teaching

and length of curriculum. A generous spirit that will give to local laws a liberal interpretation, that limits its hostility to ignorance and viciousness, that has regard as much or more for the good of the guild as a whole as for the profession of any province—could such a spirit brood over the waters, the raging waves of discord would soon be stilled. With the attitude of mind of the general practitioner in each province rests the solution of the problem Approach it in a friendly and gracious spirit and the difficulties which seem so hard will melt away. Approach it in a Chauvinistic mood, fully convinced that the superior and unparalled conditions of your province will be jeopardized by reciprocity or by federal legislation, and the present antiquated and disgraceful system must await for its removal the awakening of a younger and more intelligent generation.

It would ill become me to pass from this subject—familiar to me from my student days from the interest taken in it by that far-sighted and noble-minded man, Dr. Palmer Howard—it would ill become me, I say, not to pay a tribute of words to Dr. Roddick for the zeal and persistence with which he has laboured to promote union in the compound, comminuted fracture of the profession of this Dominion. My feeling on the subject of international, intercolonial and interprovincial registration is this—a man who presents evidence of proper training, who is a registered practitioner in his own country and who brings credentials of good standing at the time of departure, should be welcomed as a brother, treated as such in any country and registered upon payment of the usual fee. The ungenerous treatment of English physicians in Switzerland, France and Italy, and the chaotic state of internecine warfare existing on this Continent, indicates how far a miserable Chauvinism can corrupt the great and gracious ways which should characterize a liberal profession.

Though not germane to the subject, may I be allowed to refer to one other point in connection with the State Boards—a misunderstanding, I believe, of their functions. The profession asks that the man applying for admission to its ranks shall be of good character and fit to practice the science and art of medicine. The latter is easily ascertained if practical men have the place and the equipment for practical examinations. Many of the boards have not kept pace with the times, and the questions set too often show a lack of appreciation of modern methods. This has, perhaps, been unavoidable since, in the appointment of examiners, it has not always been possible to select experts. The truth is, that however well organized and equipped, the state boards cannot examine properly in the scientific branches, nor is there need to burden the

students with additional examinations in anatomy, physiology and chemistry. The Provincial and State Boards have done a great work for medical education on this continent, which they would crown and extend by doing away at once with all theoretical examinations and limiting the tests for the license to a rigid practical examination in medicine, surgery and midwifery, in which all minor subjects could be incuded.

IV. Parochialism in Medicine.

Of the parochial and more personal aspects of Chauvinism I hesitate to speak ; all of us, unwittingly as a rule, illustrate its varieties. The conditions of life which round us and bound us, whether in town or country, in college or institution, give to the most liberal a smack of parochialism, just as surely as we catch the tic of tongue of the land in which we live. The dictum put into the mouth of Ulysses, "I am a part of all that I have met," expresses the truth of the influence upon us of the social environment, but it is not the whole truth, since the size of the parish, representing the number of points of contact, is of less moment than the mental fibre of the man. Who has not known lives of the greatest freshness and nobility hampered at every turn and bound in chains the most commonplace and sordid, lives which illustrate the liberty and freedom enjoyed by minds innocent and quiet, in spite of stone walls and iron bars. On the other hand, scan the history of progress in the profession, and men the most illiberal and narrow, reeking of the most pernicious type of Chauvinism, have been among the teachers and practitioners of the large cities and great medical centres ; so true is it, that the mind is its own place and in itself can make a man independent of his environment.

There are shades and varieties which are by no means offensive. Many excellent features in a man's character may partake of its nature. What, for example, is more proper than the pride which we feel in our teachers, in the university from which we have graduated, in the hospital at which we have been trained ? He is a " poor sort " who is free from such feelings, which only manifest a proper loyalty. But it easily degenerates into a base intolerance which looks with disdain on men of other schools and other ways. The pride, too, may be in inverse proportion to the justness of the claims. There is plenty of room for honest and friendly rivalry between schools and hospitals, only a blind Chauvinism puts a man into a hostile and intolerant attitude of mind at the mention of a name. Alumni and friends should remember that indiscrimination praise of institutions or men is apt to rouse the frame of mind illustrated by the ignorant Athenian who, so weary of hearing Aristides always

called the Just, very gladly took up the oyster shell for his ostracism, and even asked Aristides himself, whom he did not know, to mark it.

A common type of collegiate Chauvinism is manifest in the narrow spirit too often displayed in filling appointments. The professoriate of the profession, the most mobile column of its great army, should be recruited with most zealous regard to fitness, irrespective of local conditions that are apt to influence the selection. Inbreeding is as hurtful to colleges as to cattle. The interchange of men, particularly of young men, is most stimulating, and the complete emancipation of the chairs which has taken place in most of our universities should extend to the medical schools. Nothing, perhaps, has done more to place German medicine in the forefront to-day than a peripatetic professoriate, owing allegiance only to the profession at large, regardless of civic sometimes, indeed, of national limitations and restrictions. We acknowledge the principle in the case of the scientific chairs, and with increasing frequency act upon it, but an attempt to extend it to other chairs may be the signal for display of rank parochialism.

Another unpleasant manifestation of collegiate Chauvinism is the outcome, perhaps, of the very keen competition which at present exists in scientific circles. Instead of a generous appreciation of the work done in other places, there is a settled hostility and a narrowness of judgment but little in keeping with the true spirit of science. Worse still is the "lock and key" laboratory in which suspicion and distrust reign, and everyone is jealous and fearful lest the other should know of or find out about his work. Thank God! this base and bastard spirit is not much seen, but it is about, and I would earnestly entreat any young man who unwittingly finds himself in a laboratory pervaded with this atmosphere, to get out ere the contagion sinks into his soul.

Chauvinism in the unit, in the general practitioner, is of much more interest and importance. It is amusing to read and hear of the passing of the family physician. There never was a time in our history in which he was so much in evidence, in which he was so prosperous, in which his prospects were so good or his power in the community more potent. The public has even begun to get sentimental over him! He still does the work; the consultants and the specialists do the talking and the writing—and take the fees! By the work, I mean that great mass of routine practice which brings the doctor into every household in the land and makes him, not alone the adviser, but the valued friend. He is the standard by which we are measured. What he is we are; and the estimate of the profession in the eyes of the public is their estimate of him. A well-trained sensible family doctor is one of the most valuable

assets in a community, worth to-day, as in Homer's time, many another man. To make him efficient is our highest ambition as teachers, to save him from evil should be our constant care as a guild. I can only refer here to certain aspects in which he is apt to show a narrow Chauvinism hurtful to himself and to us.

In no single relation of life does the general practitioner show a more illiberal spirit than in the treatment of himself. I do not refer so much to careless habits of living, to lack of routine in work, or to failure to pay due attention to the business side of the profession—sins which so easily beset him—but I would speak of his failure to realize, first, the need of a life-long progressive personal training, and secondly, the danger lest in the stress of practice he sacrifice that most precious of all possessions, his mental independence. Medicine is a most difficult art to acquire. All the college can do is to teach the student principles, based on facts in science, and give him good methods of work These simply start him in the right direction, they do not make him a good practitioner—that is his own affair. To master the art requires sustained effort, like the bird's flight which depends on the incessant action of the wings, but this sustained effort is so hard that many give up the struggle in despair. And yet it is only by persistent intelligent study of disease upon a methodical plan of examination that a man gradually learns to correlate his daily lessons with the facts of his previous experience and with that of his fellows, and so acquires clinical wisdom. Nowadays it is really not a hard matter for a well-trained man to keep abreast of the best work of the day. He need not be very scientific so long as he has a true appreciation of the dependence of his Art on Science, for, in a way, it is true that a good doctor may have practice and no theory, art and no science. To keep up a familiarity with the use of instruments of precision is an all-important help in his art, and I am profoundly convinced that as much space should be given to the clinical laboratory as to the dispensary. One great difficulty is that while waiting for the years to bring the inevitable yoke, a young fellow gets stale and loses that practised familiarity with technique which gives confidence. I wish the older practitioners would remember how important it is to encourage and utilize the young men who settle near them. In every large practice there are a dozen or more cases requiring skilled aid in the diagnosis, and this the general practitioner can have at hand. It is his duty, and failing to do so he acts in a most illiberal and unjust way to himself and to the profession at large. Not only may the older man, if he has soft arties in his grey cortex, pick up many points from the young fellow, but there is much clinical wisdom afloat in each parish which is now

wasted or dies with the old doctor, because he and the young men have never been on friendly terms.

In the fight which we have to wage incessantly against ignorance and quakery among the masses and follies of all sorts among the classes, *diagnosis*, not *drugging*, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks.

Few men live lives of more devoted self-sacrifice than the family physician, but he may become so completely absorbed in work that leisure is unknown; he has scarce time to eat or to sleep, and as Dr. Drummond remarks in one of his poems, "He's the only man, I know mem, don't get no holiday." There is danger in this treadmill life lest he lose more than health and time and rest—his intellectual independence. More than most men he feels the tragedy of isolation– that inner isolation so well expressed in Matthew Arnold's line—"We mortal millions live *alone*." Even in populous districts the practice of medicine is a lonely road which winds up-hill all the way and a man may easily go astray and never reach the Delectable mountains unless he early finds those shepherd guides of which Bunyan tells, *Knowledge*, *Experience*, *Watchful* and *Sincere*. The circumstances of life mould him into a masterful, self-confident, self-centred man, whose worst faults often partake of his best qualities. The peril is that should he cease to think for himself he becomes a mere automaton, doing a penny-in-the-slot business which places him on a level with the chemist's clerk who can hand out specifics for every ill, from the "pip" to the pox. The salt of life for him is a judicious skepticism, not the coarse crude form, but the sober sense of honest doubt expressed in the maxim of the sly old Sicilian Epicharmus, "Be sober and distrustful; these are the sinews of the understanding." A great advantage too of a skeptical attitude of mind is, as Green the historian remarks, "one is never very surprised or angry to find that one's opponents are in the right." It may keep him from self deception and from falling into that medical slumber into which so many drop, deep as the theological slumber so lashed by Erasmus, in which a man may letters, debauch himself, get drunk, and even make money—a slumber so deep at times that no torpedo-touch can waken him.

It may keep the practitioner out of the clutches of the arch enemy of his professional independence—the pernicious literature of our camp-

followers, a literature increasing in bulk, in meretricious attractiveness and in impudent audacity. To modern pharmacy we owe much and to pharmaceutical methods we shall owe much more in the future, but the profession has no more insidious foe than the large borderland pharmaceutical houses. No longer an honoured messmate, pharmacy in this form threatens to become a huge parasite, eating the vitals of the body medical. We all know only too well the bastard literature which floods the mail, every page of which illustrates the truth of the axiom, the greater the ignorance the greater the dogmatism. Much of it is advertisements of nostrums foisted on the profession by men who trade on the innocent credulity of the regular physician, quite as much as any quack preys on the gullible public. Even the most respectable houses are not free from this sin of arrogance and ignorant dogmatism in their literature. A still more dangerous enemy to the mental virility of the general practitioner, is the "drummer" of the drug house. While many of them are good sensible fellows, there are others, voluble as Cassio, impudent as Autolycus and senseless as Caliban, who will tell you glibly of the virtues of extract of the coccygeal gland in promoting pineal metabolism, and are ready to express the most emphatic opinions on questions about which the greatest masters of our art are doubtful. No class of men with which we have to deal illustrate more fully that greatest of ignorance—the ignorance which is the conceit that a man knows what he does not know; but the enthrallment of the practitioner, by the manufacturing chemist and the revival of a pseudo-scientific polypharmacy, are too large questions to be dealt with at the end of an address.

But there is a still greater sacrifice which many of us make, heedlessly and thoughtlessly forgetting that "Man does not live by bread alone." One cannot practice medicine alone and practice it early and late, as so many of us have to do, and hope to escape the malign influence of routine life. The incessant concentration of thought upon one subject, however interesting, tethers a man's mind in a narrow field. The practitioner needs culture as well as learning. The earliest picture we have in literature of a scientific physician, in our sense of the term, is as a cultured Greek gentleman; and I care not whether the young man labors among the beautiful homes on Sherbrooke Street or in the slums of Caughnawaga, or in some sparsely settled country district, he cannot afford to have learning only. In no profession does culture count for so much as in medicine, and no man needs it more than the general practitioner, working among all sorts and conditions of men, many of whom are influenced quite as much by his general ability, which they can appreciate, as by his learning of what they have no measure. The day

has passed for the "practiser of physic" to be like Mr. Robert Levet, Dr. Johnson's friend, "Obscurely wise and coarsely kind." The wider and freer the man's general education the better practitioner is he likely to be, particularly among the higher classes to whom the reassurance and sympathy of a cultivated gentleman of the type of Eryximachus, may mean much more than pills and potions. But what of the men of the type of Mr. Robert Levet or "Ole Docteur Fiset," whose virtues walk a narrow round, the men who do the hard general practices in the poorer districts of the large cities, in the factory towns and in the widely scattered rough agricultural regions—what, I hear you say has culture to do with him? Everything! It is the bichloride which may prevent the infection and may keep a man sweet and whole amid the most debasing surroundings. Of very little direct value to him in his practice—though the poor have a pretty keen appreciation of a gentlemen—it may serve to prevent the degeneration so apt to overtake the over-worked practitioner, whose nature is only too prone to be subdued like the dyer's hand to what it works in. If a man does not sell his soul, if he does not part with his birthright of independence for a mess of pottage to the Ishmaelites who harrass our borders with their clubs and oppress us with their exactions, if he can only keep *free*, the conditions of practice are nowhere incompatible with St. Paul's noble Christian or Aristotle's true gentleman.*

Whether a man will treat his professional brethren in a gentlemanly way or in a narrow illiberal spirit is partly a matter of temperament, partly a matter of training. If we had only to deal with one another the difficulties would be slight, but it must be confessed that the practice of medicine among our fellow creatures is often a testy and choleric business. When one has done his best or when a mistake has arisen through lack of special knowledge, but more particularly when, as so often happens, our heart's best sympathies have been engaged, to be misunderstood by the patient and his friends, to have evil imputed and to be maligned, is too much for human endurance and justifies a righteous indignation. Women, our greatest friends and our greatest enemies, are the chief sinners, and while one will exhaust the resources of the language in describing our mistakes and weaknesses, another will laud her pet doctor so indiscriminately that all others come under a sort of oblique condemnation. It is hard to say whether as a whole we do not suffer just as much from the indiscriminate praise. But against this evil we are helpless. Far otherwise, when we do not let the heard word die; not to listen is best, though that is not always possible, but silence

* Sir Thomas Browne.

is always possible, than which we have no better weapon in our armoury against evil-speaking, lying and slandering. The bitterness is when the tale is believed and a brother's good name is involved. Then begins the worst form of ill-treatment that the practitioner receives—and at his own hands! He allows the demon of resentment to take possession of his soul, when five minutes frank conversation might have gained a brother. What more joyful in a small or large community than to see the brethren dwelling together in unity? The bitterness, the rancour, the personal hostility which many of us remember in our younger days has been very largely replaced by a better feeling and while the golden rule is not always, as it should be, our code of ethics, we have certainly become more charitable the one towards the other.

To the senior man in our ranks we look for an example, and in the smaller towns and country districts if he would remember that it is his duty to receive and welcome the young fellow who settles near him, that he should be willing to act as his adviser and refuse to regard him as a rival, he may make a good friend and perhaps gain a brother. In speaking of professional harmony, it is hard to avoid the trite and commonplace, but neglecting the stale old chaps whose ways are set and addressing the young, to whom sympathy and encouragement is so dear, and whose way of life means so much to the profession we love, to them I would give the motto of St. Ambrose. It is told of St. Augustine, after having decided to become a Christian, that when he visited St. Ambrose, at dinner with the venerable father and his brethren, one motto above all others on the wall of the refectory caught his eye and heart, "If you cannot speak well of your brother, keep silence!"

With our History, Traditions, Achievements and Hopes, there is little room for Chauvinism in medicine. The open mind, the free spirit of science, the ready acceptance of the best from any and every source, the attitude of rational receptiveness rather than of antagonism to new ideas, the liberal and friendly relationship between different nations and different sections of the same nation, the brotherly feeling which should characterize members of the oldest, most beneficient and universal guild that the race has evolved in its upward progress—these should neutralize the tendencies upon which I have so lightly touched.

I began by speaking of the art of detachment as that rare and precious quality demanded of one who wished to take a philosophic view of the profession as a whole. In another way and in another sense this art may be still more precious. There is possible to each one of us a higher type of intellectual detachment, a sort of separation from the vegetative life of the work-a-day world—always too much with us—

which may enable a man to gain a true knowledge of himself and of his relations to his fellows. Once attained, self-deception is impossible, and he may see himself even as he is seen—not always as he would like to be seen—and his own deeds and the deeds of others stand out in their true light. In such an atmosphere pity for himself is so commingled with sympathy and love for others that there is no place left for criticism or for a harsh judgment of his brother. "But these are Thoughts of things which Thoughts but tenderly touch," as that most liberal of men and most distinguished of general practitioners, Sir Thomas Browne, so beautifully remarks; and it may be sufficient to remind this audience, made up of practical men, *that the word of action is stronger than the word of speech.*

CANADIAN MEDICAL ASSOCIATION.

THE thirty-fifth annual meeting of the Canadian Medical Association was held in the City of Montreal on the 16th, 17th and 18th of September, under the presidency of Dr. Francis J. Shepherd.

As an evidence of the great success which attended this meeting, the fact that more physicians registered on the first day than on any other previous first day, speaks volumes.

At the morning general session of the first day a resolution of regret at the recent death of Professor Virchow, which was at the same time one of appreciation for the great work of this eminent pathologist, was proposed by Professor Adami; seconded by Dr. Gardner, Montreal, and carried unanimously.

The meeting divided into sectons, Dr. McPhedran, Toronto, taking the chair at the Medical session; while Dr. O. M. Jones, Victoria, B C., looked after the Surgical section.

Medical Section.

The forenoon of first day. Living case, Splenic Anaemia.

Dr. H. A. Lafleur, Montreal, presented patient—a man in middle life. There was a tumor—a movable mass about midway between the lower ribs on the left side and the crest of the ilium, with pulsation, but not expansile, over the tumor. The first blood count, made in March, showed 75 per cent. haemoglobin. the red corpusles 5,000,000, the white 6,400. A blood count was made again on the 15th Sept., 1902, showed 4,000,000, and 5,800, respectively.

The tumor changed according to degree and distension of the stomach. There was absence of mobility.

Dr. Osler referred to the difficulty and the lack of complete mobility in diagnosing this case and of enlarged spleen being often clinically mistaken for something else. This was just one of those cases in which the diagnosis was more surgical than clinical.

Some Further Results in the Treatment of Tuberculosis.

Dr. J. H. Elliott, of the Gravenhurst Sanitarium, contributed this paper:

At a meeting of this association in Toronto in 1899, a report was made upon 155 cases of Pulmonary Tuberculosis under Sanitarium treatment. This paper is a further contribution covering some 400 additional cases treated during the past three years. The nomenclature used in the classification of discharged patients is that adopted by Trudeau: "Apparently cured;" "Disease Arrested;" "Much Improved;" "Stationary;" and "Failed."

Five years' experience has shown that almost all of the patients discharged "apparently cured" remain perfectly well. Of those with "disease arrested" many have progressed to good health at home by following the rules of life learned at the Sanitorium, renewed activity of the disease, when occurring having been as a rule due to unfavorable surroundings, or the necessity of again taking up unsuitable work.

Not the least important part of the work of a Sanitorium is its educative influence. Each patient who returns home is a teacher of the value and importance of a hygienic life, to those who wish to retain their health, as well as those who are not strong.

Experience is demonstrating the immense amount of influence for good which results from a properly equipped and conducted Sanitorium. It is unfortunate that there are not more of them. It is hoped that the attention of our philanthropists will be drawn to the crying need of such institutions, and that ere long we shall have a number of them in various provinces of Canada.

Dr. Osler congratulated Dr. Elliott on the promising results which he has obtained. Two important points should be kept well in mind:— First, Early diagnosis, and, second, getting patient as soon as possible under proper professional control.

Dr. T. V. Walker, St. John, N.B., referred to the control the physician in the Sanitorium had over the patient.

Dr. John Ferguson, Toronto, spoke of the positive advances that have been made along the line of the curability of pulmonory tuberculosis.

Dr. McPhedran, Toronto, emphasized training patients how to care for themselves at home. He believes, too, that it is true, that the

neighborhoods of sanitaria, are always areas where tuberculosis is always diminishing.

Pleurisy as Associated with Tuberculosis.

Dr. John Hunter Toronto, read this paper. He first referred to the manner in which bacilli reached the visceral and parietal plurae through the sub-pleural, bronchial or tracheal lymphatic glands, and from the cervical, mediastinal and pertoneal lymphatics; also from the tonsils. In arriving at a diagnosis of pleurisy, a vigilant search should be made for a possible tuberculous origin. One should not always consider the outlook gloomy as with properly carried out treatment, the progress is much more favorable than in pulmonary tuberculosis. In at least two-thirds of tubercular pleurisy it is a curable affection. The rapidity of the filling of the pleural cavity is especially characteristic of tuberculosis cases.

Dwelling upon treatment, during convalescence, deep breathing should be practised very assiduously, and inflation with rubber bags is a valuable exercise. Then change to a suitable climate should be insisted on if the progress towards recovery be retarded.

"Clinical Notes on Blood Pressure in Diseased Conditions," by Dr. A. E. Orr, Montreal.

A Gaertner's Tonometer was shown, and the manner of its use demonstrated. Four hundred patients at the Royal Victoria Hospital, Montreal, were experimented on. The normal pressure was found to be 110 to 120. Seventy cases of typhoid fever were recorded in different stages, showing an average blood pressure of 104.5 m.m. It was highest, but still sub-normal, in the first week. There was only one death, which took place in a man of thirty-five years, when pressure was 105 on tenth day, 110 on twenty-first day; then three hemorrhages, and on the twenty-fourth day a fatal hemorrhage.

A large proportion of these had cold baths or cold sponging. Nineteen cases of chronic nephritis were recorded. Of this group the highest was 260; average, 208.5. Of acute nephritis there were seven cases; only three of these showed high pressure. Of arterio sclerosis 27 cases were recorded; highest, 110, 16 being 150 and over; 4 from 130 to 145; 3 from 110 to 125; 4 sub-normal. The highest was in a man of 72; glycosuria, no albumen.

Valvular diseases of heart, 48 cases, including 11 cases of mitral regurgitation. In mitral stenosis 8 cases were recorded, 6 being normal. Mitral stenosis with mitral regurgitation, 14 cases. Eleven had practically normal tension. Aortic insufficiency, 3 cases. Myocarditis, 4 cases, one man, aged 60, having pressure of 80. Hypertrophy and dilitation of

heart of unknown causation, 2 cases, 120 and 110, respectively. There were 18 cases with acute lobar pneumonia, with an average for the series of 92.7; only one death. Pleurisy, 18 cases; neurasthenia, 18 cases, thirteen having normal pressure; 3 from 135 to 140; one of 160. In malignant disease, cancer of viscera, there were no high readings. Anæmia, 6 cases, all being normal. Addison's disease, both in early stage; both normal. Purpura hæmorrhagica, one case; normal. Puerperal septicæmia, one prolonged case, ending in recovery; had extremely low blood count; 930,000; above normal. One gall bladder case, with suppuration—a blood pressure of only 50 ten days before death.

One lead poisoning, 3 of jaundice, 1 of tubercular meningitis, 2 of diabetes, 2 of exephthalmic goitre, 8 of acute articular rheumatism, heart not affected; chronic articular rheumatism, 4 cases, all normal; gonorrheal rheumatism. 8 cases, 6 normal; rheumatoid arthritis, 16 cases. 6 normal; gout, 4 cases.

There was one case of hemiplegia and 14 of tabes dorsalis, 11 normal pressure; cerebral tumor, 8 cases; general paralysis of insane, 1 case; Friedrich Ataxia, 1 with albuminuria 140; 1 acute ascending paralysis, 140; 2 cases tic doloreux, one 130 during the attack. There was one case of epidemic influenza and 36 miscellaneous cases.

In discussing this paper Dr. Osler considered it to be the best contributed article on the subject.

"On the Technique of Recording the Venus Pulse."

Dr. W. S. Morrow, Montreal, gave a practical demonstration on the blackboard, and presented a living subject on this topic.

Surgical Section.

First Day—Morning Session.—"Amputation of the upper extremity for sarcoma of the shoulder joint; living case," by Dr. J. Alex. Hutchison, Montreal.

The patient—a young woman—presented by Dr. Hutchison, gave a history of previous injury to the shoulder, followed by the development of a growth in the head of the humerous, accompanied by intense pain. An X-ray of the parts revealed the presence of a large growth, which invaded the joint and involved the scapula. The patient was in an extremely unsatisfactory condition for operation, and presented evidences of marked cardiac disease. The incision extended from the middle of the clavicle in front down over the pectoral regions to the lower part of the axilla, and behind, passed over the scapula down to meet the anterior incision.

After severing the middle of the clavicle the great vessels were ligated, the brachial nerves divided high up, the muscles divided and the scapula freed from its attachments. There was little hemorrhage, and the wound healed readily. Microscopic examination of the growth showed it to be a mixed spindle, and round, celled myeloid sarcoma.

"A fatal case of secondary hemorrhage four days following the removal of adenoids," by Dr. Perry G. Goldsmith, Belleville, Ont.

This paper deals with the case of a child operated on by Dr. Goldsmith for obstructive deafness due to enlarged faucial tonsils. The operation was not unusual, and the condition of the patient, on the second and third day after the operation, was apparently satisfactory; on the fourth day, however, repeated and alarming attacks of hemorrhage set in, resulting fatally in a few hours. There was no history of hemophilia. The patient was under the care of the family physician at the time of death, and as no post mortem could be obtained, the cause of the hemorrhage remained unknown.

"Occlusion of posterior naris," by Dr. H. D. Hamilton, Montreal.

The patient was a young man aged 17, who complained of constant discharge from right naris, with complete obstruction of the same side. Duration of the condition, about 12 months.

On examination, the patient presented a complete bony partition occluding the right choana.

Family and personal history was negative.

Treatment: The bony wall was perforated, and the opening further enlarged by graduated bongies.

"On the use of the subcutaneous injections of paraffin for correcting deformities of the nose," by Dr. G. Grimmer, Montreal.

Dr. Grimmer spoke briefly of various other deformities which had been corrected in this manner. In the preparation of the paraffin, it is first sterilized by subjecting it to high temperature. It is then injected by means of a sterilized syringe. In the case of the nose, the inner canthi of the eyes should be protected from the spreading of the paraffin, by firm pressure applied to the sides of the nose by an assistant's fingers. After injection, the parts are molded by the operator as required.

After treatment: Collodion is to be applied to the needle puncture, and cold compresses, to control oedema of the nose and eyelids.

Some possible dangers from the treatment are, paraffin embolism, and necrosis of the skin over the parts.

Dr. Grimmer exhibited two patients successfully treated in this manner; also two rabbits which had been subjected to similar injections.

"The telephonic properties of the inflamed abdomen; a sign not hitherto described, due to paralysis of the bowel in peritonitis" by Dr. Geo. A. Peters, Toronto.

In auscultating the abdomen with a view to ascertaining whether there was paralysis of the bowel in cases of appendicitis, typhoid perforations, traumatism, and other conditions which stand in a causative relation to perotinitis, Dr. Peters had observed that where the gurgling sounds due to the passage of gas and liquid in the bowel are absent from paralysis, the heart sounds are invariably very plainly present over the whole abdomen. In intense cases, particularly in children, both inspiratory and expiratory breath sounds may be heard. Dr. Peters' explanation of the phenomena is: unlike the healthy bowel—where the gas is retained in certain well defined and circumscribed compartments, each constituting a complete retainer in itself, with vital walls possessing a muscular tonicity under nervous control,—the paralysed bowel, by reason of its flaccid and atonic condition, permits an entire change in the disposition of the contained gas; the entire distended abdomen becomes practically and accoustically considered, a continuous column of air or gas, of the precise principle of the stethescope. The effect of this is further heightened by the rigid abdominal wall, which acts as a sounding board. The prognostic significance would seem to indicate an unfavorable termination in those cases where the sign is very well marked in cases of septic origin.

"A case of Filariasis in man cured by operation," by Dr. A. Primrose, Toronto.

A man from the West Indies suffering from lymph scrotum presented himself for treatment and gave a history of attacks of fever which suggested the presence of Filaria. On examination of the blood one found the embryos present in large numbers. The embryo filariæ were found in large numbers at night, but disappeared from the blood during the day. An operation was performed and a large portion of the scrotum removed. The excised tissue was carefully examined by testing it in salt solution, and a parent worm was discovered and removed alive This proved to be a female, and it was subsequently fixed and mounted in a suitable manner for microscopic examination. Subsequent to operation the filaria embryos entirely disappeared from the blood, and the inference was that the parent producing the embryos had been removed by operation.

The parent worm was afterwards carefully studied by Dr. J. H. Elliott, M.D., Toronto, (late of the Malaria Expedition to Nigeria from Liverpool School of Tropical Medicine) and a report of his investigations with drawings of the worm formed a part of the paper as communicated by Dr. Primrose.

GENERAL SESSION.

First Day—Afternoon.

Address in Surgery – "The Contribution of Pathology to Surgery," by Dr. John Stewart, Halifax, N.S.

Owing to the unavoidable absence of Dr. Stewart, this paper was read by Dr. J. W. Stirling, Montreal. (See page 86.)

PRESIDENT'S ADDRESS.

On the evening of the first day, in the Arts Museum, Dr. Francis J. Shepherd of Montreal delivered the annual presidential address. (See page 75.)

Second Day—Forenoon.

A general meeting of the Associatien opened with a discussion on diseases of the gall bladder and bile ducts, Dr. Alex. McPhedran, Toronto, introduced the medical diagnosis in this discussion. He mentioned the fact that the gall ducts are narrower at their entrance to the bowel than in other parts of their lumen, and as they lie nearly horizontally the outflow of bile is easily retarded or obstructed. The ducts are much exposed to infection from the intestinal tract. Of the cardinal symptoms in these cases Dr. McPhedran considered jaundice the most common, while pain varies but is generally intense. The attendant fever is generally due to toxic absorption. The main diseases to be considered in differential diagnosis, are, catarrhal and suppurative cholangitis and acute yellow atrophy. Most catarrhal conditions are infective, but the chills and fever may occur without pus formation. The most common germ present is the common colon bacillus. In the gangrenous cases the symptoms are often ill defined. A most characteristic sign of gall stones is the recurrence of the attack.

Dr. A. D. Blackader of Montreal, in discussing the treatment of gall bladder affections said he would confine himself principally to the catarrhal forms of the disease. He considers the condition more commonly due to altered secretion of the bile ducts, the altered mucus causing inspissation of the bile. Infection of bile he thought takes place in two ways, through the bile ducts and through the portal circulation. In the matter of treatment he considers that no drugs stimulate the flow of bile to the same extent as the bile salts. The flow is increased by exercise and deep breathing. Diet should be carefully considered, should be simple, and as far as possible should contain a large amount of fat. Such patients should drink plenty of pure or mineral water. The patient should also have due regard to a proper method of dress, no corsets or constricting clothing should be worn.

Surgical Diagnosis was introduced by Dr. James Bell, of Montreal. He said it was common to find early vague signs of gastro-intestinal indigestion, which were often found to be present for a long time before an acute attack was precipitated. He spoke of the Colon and Typhoid Bacilli as common causes of infective conditions.

The subject of surgical treatment was introduced by Dr. J. F. W. Ross, of Toronto. In commencing his paper Dr. Ross expressed a certain lack of faith in the so-called medical treatment of gall stones. Speaking of some details of gall stone operations, Dr. Ross advocated drainage through Morrison's pouch. He laid great stress on the free use of gauze packing to prevent leakage into the peritoneal cavity. In gangrene and empyema of the gall bladder he does not advise removal of the gall bladder but prefers opening, flushing and draining. In many cases of cystic enlargement of the gall bladder, however, he advised entire removal of the viscus. It is well to remember, after removal of the gall bladder, that gall stones may form in the liver and may pass out into the intestines. He considers mucous fistulæ, which occasionally follow operation, as the most troublesome, and said the evil should as far as possible be prevented by the use of a small drainage tube. He also drew attention to the importance of being sure that the drainge tubes did not become blocked.

The discussion of the surgical treatment was led by Dr. G. E. Armstrong, Montreal, who recognizes and recommends the employment of medicinal treatment first in gall stones, etc. He does not advise removal of the gall bladder, for stone in the cystic duct. He recommends lavage of the stomach before operating on all gall bladder cases, and as it is difficult to know what the surgeon may encounter on opening the abdomen, he advises the administration of calcium chloride before and after operation to prevent possible haemorrhage.

Dr. Dudley Allan, of Cleveland, Ohio, next spoke "On the Importance of Early Operation on the Gall Bladder." He considers in view of the fact that an accurate diagnosis is often impossible, an exploratory incision, at least, should generally be made early, when, he claims, it is often found that many obscure cases are quite amenable to surgical treatment, and, in fact would fail to recover if we were to temporise. He recited a number of cases where the diagnosis was uncertain, where he had made an exploratory incision and had often been gratified with the results.

The subject was further discussed by Sir Wiliiam Hingston, of Montreal, and Dr. Alex. H. Ferguson, of Chicago.

"On Foreign Bodies in the Fermiform Appendix" by Dr. James Bell, of Montreal.

In this paper the writer expresses his opinion that appendicitis never depends on the presence of foreign bodies in the lumen of the appendix. There is little doubt, however, that when foreign bodies gain entrance accidentally into the appendix, they aggravate an otherwise septic infection. Among the foreign bodies which he has found in the appendix are,—in two cases pins, in two cases seeds, in one case wood fibre, in one case gall stones and in another case a fish bone.

Dr. Bell's paper was discussed by Mr. Irving Cameron, of Toronto.

MEDICAL SECTION:

Second Day: Afternoon. "Kernig's Sign. The Frequency of Occurrence, Causation and Clinical Significance, by Dr. R. D. Rudolf, Toronto.

This paper contained the results of an investigation carried out in the different hospitals in Toronto. A large number of patients of all ages was examined, suffering from diverse troubles, and the angles at the hip and knee accurately measured in over 200 of them. In 162, Kernig's sign was present in 97, that is, in over 60 per cent. It was always absent in perfectly healthy children. Dr. Rudolf considers that a more convenient plan is to extend the knee and then flex the hip as far as possible. Sometimes there is more than the usual degree of stretching of the ham strings possible and this extra flexion can, by the writer's method, be exactly measured when Kernig's sign could not show it. Out of 97 cases in which Kernig's sign was present, in 59 an angle of less than 165 degrees at the knee could only be obtained, and of these in 10 cases the angle was 135 degrees or less, showing a very marked degree of the sign. These 59 cases were of all kinds and only one of them was meningitis. Dr. Rudolf then went on to state that none of the theories of explanation of Kernig's sign were satisfactory as to its occurrence in meningitis.

"Multiple Sarcoma. Report of a Case."

This case was reported by Drs. F. N. G. Starr and J. J. MacKenzie of Toronto.

Dr. MacKenzie read the notes on the case. No autopsy could be made. The patient was a female 38 years of age, a seamstress. The personal or family history had no bearing on the case. For a number of years before 1901, the patient had a goitre, which, under treatment, almost disappeared in the winter of 1901. In April of this year a lump about the size of a pea was noticed slightly to the left of the middle line of the abdomen near the symphysis pubis, hard but painless and subcut-

aneous. In May two or three appeared in the middle line, an inch above the umbilicus then two or three were discovered in the back. In June two others appeared to the right of the middle line of the abdomen. In July several additional lumps were discovered in the right breast, in size from a pea to a bean. Loss of weight occurred. In August the liver was noticed to be enlarging. Commenced taking arsenic in September. In October a large tumor appeared in the left breast, and a small one was also noticed in the left thigh. Patient began to suffer from rheumatic pains. In November and December the tumors appeared in enormous numbers over the chest and back, abdomen, thighs, and arms above elbows, neck and over back, sides and top of head. In January, 1902, chains of tumors bean-sized, were noticed in the cervical region, submaxilliary and suboccipital regions. By March the 8th she had thousands of tumors, most quite hard. Excisions were made and microscopic examination revealed a type of spindle-celled sarcoma, in which the prevailing cell was very long. As regards treatment the patient took arsenic with no influence on the condition. Thyroid extract produced slight diminution in the size of the tumors. The patient died. Without autopsy one cannot say where the primary seat of the disease was, although from the great involvement of the liver, that might be the source of the disease.

"On Some Points in Cerebral Localization. Illustrated by a Series of Morbid Specimens and Some Living Cases."

At an early morning session held at the Royal Victoria Hospital Dr. James Stewart conducted this clinic.

"On the Asylum—the Hospital for the Insane—and the Study of Psychiatry."

Dr. Stuart Paton, Baltimore, Md. advocated hospitals or wards in insane asylums, for proper treatment of acute cases. He also pointed out the benefits to be derived from having medical men to form a consulting staff to an asylum.

"Anaesthetic Leprosy."

Two very interesting patients, father and son, were presented by Dr C. N. Valin, Montreal, according to whom they proved to a certainty the contagiousness of this disease. From the way they had progressed under treatment Dr. Valin considered the cases hopeful.

Surgical Section.

Second Day: Afternoon. "Report of Three Cases of Congenital Dislocation of the Hip." By Dr. A. E. Garrow, Montreal.

The etiology of this condition is not well established, but heredity seems to play a part. Dr. Garrow speaks of two methods of reduction,

(a) Bloodless method, (b) Through an Incision. The chief obstacle to reduction is generally due to fibrous stricture of the lower part of the capsule. Dr. Garrow's experience has been mainly by the open method. This paper was further discussed by Dr. Shepherd of Montreal.

"The Operative Treatment of Goitre with a Report of Cases." By Dr. Ingersoll Olmsted, Hamilton, Ont.

As the medical treatment of goitre is very unsatisfactory, an operation is recommended in the following conditions;—1st, as soon as a goitre becomes dangerous, that is, when attacks of dyspnoea occur, or inflammatory changes occur, or there is the slightest suspicion of a malignant degeneration. 2nd, all enlarged thyroids having a tendency to grow towards the aperture of the thorax, even if they are moveable. 3rd, goitres that have reached considerable development from the formation of single large colloid nodes. 4th, when with a moderate goitre symptoms like those of Basedow's disease appear, accompanied with an increased development of the goitre. The operation advised is the one usually performed by Kocher and is done under cocaine anaesthesia. It consists of a transverse symmetrically bowed incision, with its convexity downward, from the outer surface of one sterno-mastoid muscle to the other, higher or lower according to the position of the goitre. The skin, underlying platysma and fascia of the sterno-hyoid and sterno-thyroid muscles are reflected upwards. The fascia joining the muscles in the median line of the neck is then divided, as well as the outer fibrous capsule of the gland. The half of the gland which is most involved, is then shelled out of its capsule; the superior and inferior thyroid arteries tied and the isthmus cut with goitre clamp and ligated. The remaining attachments are then ligated and portion removed. The wound is closed with a subcuticular wire suture without drainage.

Twelve cases operated on during the past year were reported. The average stay in the hospital was seven days. The resulting scar was very slight and little or no pain was complained of during the operation.

"The Pathologic Prostate and its Removal Through the Perineum." By Dr. Alex. H. Ferguson, Chicago, Ill.

In the opening of his paper Dr. Ferguson said he proposed to discuss more particularly hypertrophy of the prostate. Some of the microscopic changes in the hypertrophied prostate are, 1st, increased weight—may be up to eight or nine ounces; 2nd, greater size; 3rd, any part or the whole of the gland may be involved. Shape varies very much. Microscopically, Dr. Ferguson found all hypertrophied prostates were benign in character. He also found frequent evidences of inflammatory changes. The effects produced may be stated as, 1st, the prostatic urethra is contracted and

elongated; 2nd, the vesical meatus is often rendered patulous and sometimes obliterated; 3rd, the ejectulatory ducts are also often patulous, allowing regurgitation of the semen into the bladder, and they are also often obstructed. The effects of obstruction on the kidneys and bladder are too well known to require discussion. *Treatment*: Dr. Ferguson's method of removal is by the perineal route. He uses a prostatic depressor introduced into the urethra, then elevated in such a manner as to press the prostate down in the perineum. The fingers of the left hand are passed into the rectum as a guide, and then he makes one bold incision through the perineum down to the prostatic capsule. Dr. Ferguson exhibited some special instruments devised and used by himself in this operation.

"The Surgical Treatment of Enlarged Prostate." Dr. G. E. Armstrong, Montreal.

Dr. Armstrong exhibited a specially constructed suprapubic vesical speculum, devised by himself, with a lateral opening which allows the prostate alone to come well in view in the speculum. The speculum can be packed around with gauze to protect the parts from possible burning, the offensive lobe or lobes are then cauterized with the thermo-cautery. Dr. Armstrong reported seven cases successfully operated upon. One point of advantage in this operation lies in the fact that the cauterized surface does not admit of septic absorption. He urges this method in the early stages of prostatic hypertrophy.

The paper by Dr. Ferguson and also that of Dr. Armstrong, was discussed by Dr. James Bell, Montreal, Sir William Hingston, Montreal, Mr. Irving Cameron, Toronto, and Dr. Elder, Montreal.

ADDRESS IN MEDICINE.

At the evening session of the second day the Address in Medicine was delivered by Dr. William Osler, Baltimore, M.D. (See page 95.)

"The X-Rays as a Therapeutic Agent." By Dr. C. R. Dickson, of Toronto.

Dr. Dickson said, the explanation of the rationale of the X-ray is at best as yet but a hypothesis. Fortunately we have a practical proof of its utility as a therapeutic agent in many conditions. Dr. Dick-son has used it successfully in the following cases:—Naevus, lupus, vulgaris, tubercular joints, scleroderma, subacute articular rheumatism (it relieved pain in many cases), neurasthenia, carcinoma of the stomach, (this patient gained weight), and in Carcinoma of the rectum, which case is also improving.

Dr. G. P. Girdwood, of Montreal, read a paper on the *X-Rays Diagnostic and Therapeutic.* and exhibited a number of photographs.

The X-Ray in Cancer, was the title of a paper by Dr. A. R. Robinson of New York. A strong plea is that the X-ray largely does away with the knife, and leaves little scar. It is probable that all superficial cancers can be removed by the X-ray if seen early. In a delicate locality, such as the eyelid, the rays should always be used as paste, or the knife will do more harm When malignant growths have spread deeply, the X-ray may be considered our best treatment.

SURGICAL SECTION.

Third day :—Forenoon.

The first paper was "*Remarks on Sympathetic Ophthalmia.*" By Dr. G Herbert Burnham, Toronto, followed by a paper on the "*Occular Manifestation of systemic Gonorrhoea.*" By Dr W. Gordon M. Byers, Montreal.

A paper on "*Excision of the Caecum,*" was read by Dr. O. M. Jones, Victoria, B. C. Dr. Jones cited four cases operation. The first about two years after. A post mortem proved that the cancerous growth had not recurred at the point of the original operation. Symptoms in all cases were, griping pains in the abdomen, losses of weight and irregular action of the bowels, together with the presence of a mass in the region of the caecum.

"On three cases of Perforating Typhoid Ulcer. Successfully operated on"

Dr. F. J. Shepherd, Montreal, reported these cases. First, as to technique : Dr. Shepherd has always made use of the lateral incision and has usually found the perforation near the ileo-caecal valve. By this incision the site of the perforation is more easily found than by the median. He has always closed the incision by turning in the bowel and making use of a continuous Lembert suture, employing fine silk. Other ulcerations in the neighbourhood are treated in the same way. Rubber drainage is employed. There is always suppuration in these cases and usually a hernia as a re ult. General anaethesia is always used in these cases. Early and rapid operation, seeing that there are no others likely to perforate, are important points. The first case was a women of 30, with ambulatory form ; the second was a women of 28 admitted on the 8th day. It is of interest in this case that although perforation has taken place there was no leucocytosis. Third was a male aet 30 in the third week seized with severe pain and one hour after there was obliteration of the liver dullness and marked leucocytosis. All are quite well with the exception of hernia.

Dr. Lapthorn Smith, of Montreal, presented a paper on "A case of Total Extirpation of the Urinary Bladder for Cancer." General considerations ; evolution of the operation in Europe and America ; methods employed ; results in 100 reported cases. In the author's case there had been previous removal of fibroid by myomectomy. This was followed by cystitis which was treated, first by medicine, then by injection and afterwards by drainage by permanent catheter, and then by buttonhole operation when the cancer was detected by the finger. Extraperitoneal removal of bladder and affected part of ureter and pelvic glands. Recovery from operation but death on the 7th day from exhaustion.

THIRD DAY.

General—Morning Session.

Election of Officers.—Dr. T. G. Roddick, M.P., Chairman of Nominating Committee, presented the report of this committee. London, Ont., was selected as the next place of meeting,

President, Dr. W. H. Moorehouse, London, Ont. Vice-Presidents: Prince Edward Island, James Warburton; Nova Scotia, John Stewart, Halifax; New Brunswick, W. C. Crockett, Fredericton; Quebec, Dr. Mercier, Montreal; Ontario, W P. Caven, Toronto; Manitoba, Dr. McConnell, Morden; Northwest Territories, J. D. Lafferty, Calgary; British Columbia, C. J. Fagan, Victoria. Local Secretaries: Prince Edward Island, C. A. MacPhail, Summerside; Nova Scotia, Dr. Morse, Digby; New Brunswick, J. R. McIntosh, St. John; Quebec, R. Tait McKenzie, Montreal; Ontario, Hadley D. Williams, London; Manitoba, J. T. Lamont, Treherne; Northwest Territories, D. Low, Regina; British Columbia, L. H. McKechnie, Vancouver; General Secretary, George Elliott, 129 John Street, Toronto, Ont.; Treasurer, H. B. Small, Ottawa, Ont.; Executive Council, Drs. Moore, Eccles and Wishart, London, Ont.

Dominion Health Bureau.

Dr. E. P. Lachapelle, Secretary of the Board of Health of the Province of Quebec, moved the following resolution, seconded by Dr. J. R. Jones, Winnipeg, which was carried unanimously:—

"Whereas public health, with all that is comprised in the term, sanitary science, has acquired great prominence in all civilized countries and

Whereas enormously practical results have been secured in the community at large, by the creation of health departments under Governmental supervision and control, and

Whereas greater authority and usefulness are given to health regulations and suggestions when they emanate from an acknowledged Government department;

Therefore, be it resolved, that in the opinion of the Canadian Medical Association, now in session, the time is opportune for the Dominion Government to earnestly consider the expediency of creating a separate department of public health, under one of the existing ministers, so that regulations, suggestions and correspondence on such health matters as fall within the jurisdiction of the Federal Government, may be issued with the authority of a department of public health.

That copies of this resolution be sent by the general secretary, to the Governor-General in Council and to the Hon. the Minister of Agriculture."

Treasurer's Report.

Dr. H. B. Small presented his report. 317 members had been in attendance, nearly 100 larger than any other previous meeting. All outstanding indebtedness had been paid and there was in the treasury $325 to the good of the association.

Votes of thanks were passed to Mr. and Mrs. James Ross, of Montreal, in whose handsome grounds had been tendered a garden party on the afternoon of the first day; to the local committee and transportation committee, special reference being made to Drs. C. F. Martin and J. Alex. Hutchison, for their indefatigible efforts for the success of the meeting; to the treasurer; to the president, and the profession generally for their hospitality.

Thus was closed the greatest meeting of the 35 years of the Association and it is to be hoped that the profession throughout Canada will still further take an active interest in their national organization.

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EDITORIAL.

THE CANADIAN MEDICAL ASSOCIATION.

IT may truthfully be said that the recent meeting of the Canadian Medical Association was a record one. Never before in the history of this Association was there such a large attendance. But the mere fact of numbers in itself would not constitute a great meeting. There were other and more important features that will make the Montreal meeting worthy of remembrance for many a year.

One of these features was the unbounded hospitality of the profession and its friends in Montreal. No effort was spared to make every one feel at home, and obtain as much enjoyment as was possible with the busy days of the convention. The thanks of every one who attended the meeting are due to the local members of the executive, who had almost the entire trouble of making all the arrangements. That these arrangements were well planned out is borne out by the fact that everything came off like clockwork. In this connection, however, no small mede of praise is due the General Secretary, Dr. George Elliott, who, we are glad to state, was re-elected. Drs. Shepherd, Martin, Macphail, Abbott, Hutchison, Sir W. Hingston, Birkett, J. G. Adami, Reddy and Stirling, all of Montreal, must be singled out for special praise.

The At-Home, given by Mrs. James Ross, of Peel Street, was both an enjoyable and brilliant event. Every one was made to feel at home. All who availed themselves of Mrs. Ross's kind invitation carried away the most delightful recollections of their reception and entertainment. The thanks, tendered by the Association to Mrs. Ross, were but a small portion of the real thanks expressed by every visiting member.

The reception, given by the President and the local members of the Association in the Art Association Building deserves more than a passing word. On this occasion the President delivered his address, and members and their friends had an opportunity of viewing the splendid collection of paintings covering the walls of the spacious rooms of the building. In addition to excellent singing abundant refreshments were served by the ladies.

A local committee of ladies arranged a most delightful reception for the lady friends of the visiting members. Refreshments were served, and the visiting ladies were taken for a very pleasant outing to many places of interest.

Thursday afternoon was spent by the members of the Association and a large number of friends in the most perfect enjoyment of a ride on the Grand Trunk over the Victoria Jubilee bridge, a good opportunity being afforded of seeing this famous structure. The steamer "Duchess of York" was in waiting to take all for a sail on Lake St. Louis, and then down the Lachine rapids. Refreshments were served on the steamer to the sound of music, and all were more than delighted.

The complimentary smoking concert in the Victoria Rifles Armoury, on Thursday evening, was both well attended and enjoyed. Apart, however, from these entertainments, the visiting members were deluged with invitations to the homes of the profession in Montreal and their many friends, who did so much to make everything pass off so smoothly.

But the most important feature of this great meeting was its educational side. The addresses, papers and discussions were numerous and meritorious. They were certainly such as would reflect credit upon any medical gathering, whether national or international. We shall, however, only refer to the three main addresses.

The address of the president, Dr. F. J. Shepherd, was full of solid matter for careful reflection. At first thought, some may not agree with some portions of his address; and yet we are of the opinion that, the more it is studied, the more general will be the assent to the main positions taken in it. From his attitude on the Roddick bill there should be no dissent. It is to be sincerely hoped that the day spring of a national council and standard is at hand, and that, so far as medicine is concerned, the provinces will become as one. Nationalism in medicine may have its evils, but what shall be said of provincialism!

Upon Dr. Shepherd's remarks on the rewards of the physician and the many forms of quackery nothing need be said. They speak for themselves. But it would not do to pass over so lightly his words regarding laboratory teaching. No one should carry off the idea that he is inveighing against the value of work done in the laboratory. Dr. Shepherd is too broad and liberal in his views upon the medical sciences to make any such mistake as this. What he is levelling his shaft against is the tendency to absorb so much of the student's time in laboratory work that other and most important subjects must, as a consequence, be neglected. The attempt to make medical students specialists in laboratory work is a great error, and a growing one in present day teaching.

What should be imparted is a good working knowledge, or foundation in chemistry, microscopy and bacteriology. No one in the profession is more alive to the debt which general medicine and surgery owe to the study of bacteriology than Dr. Shepherd; but such study must be of the post graduate character. Upon the whole, we congratulate Dr. Shepherd on his able address, and feel sure that it will not be as water spilt upon the ground that cannot be gathered up again, but will return in due time bearing much fruit.

The address on surgery by Dr. John Stewart, of Halifax, must be called an able effort. In it a fine parallel is drawn between the early navigators venturing forth upon an unknown ocean, without charts, or instruments to guide their course; and the early investigators in medicine, forcing from nature, one by one, her hidden secrets. From the days of mysticism to those of scientific experiment we are led step by step. From Paracelsus to Vesalius, from Harvey to Hunter, and on to such men as Lister there is a long lapse of time, but no vital break in the chain of progress. The one thing that was lacking in the address was that the distinguished author was detained at home through illness; and therefore it had to be read for him by another, a task which was admirably performed by Dr. J. W. Stirling.

When we reach the address in medicine, we reach one of the most brilliant deliverances that ever came from any platform in Canada. Dr. W. Osler, in language and thought that bore evidence of extensive scholarship, preached a sermon on the life and work of the doctor and what he ought to be morally, socially and professionally, in order that his life and work might attain to their highest levels and yield their finest fruits. Lengthy as the address is, it is impossible to curtail it; for all parts of it are equally good. Every sentence is a text for further elaboration. He too, like the President, spoke in strong terms against sectionalism in medicine. There ought to be no provincial dividing lines. In Dr. Osler, the Dominion Registration Bill found a champion of great power. It can be said of the address in medicine, as Keats wrote in his Endymion, 'A thing of beauty is a joy forever."

Just to the extent that the Montreal meeting was a great success, the difficulties of our London friends are increased. But we have confidence in the profession of the Forest City, and we feel sure that no stone will be left unturned to make the meeting of 1903 as complete a success in every way as was the one of 1902. *Wir heissen euch haffen.*

THE OPENING OF THE COLLEGES.

AGAIN the time has come round for the opening of the medical colleges. From all parts of this vast Dominion, students betake themselves to the various seats of medical learning—the former students to resume their work, and the new ones, with mingled hopes and doubts, to break first ground. There are over 2,000 young men studying medicine in Canada. This would, in round numbers, mean about 700 fresh recruits; and about 400 annual graduates.

It has often been said, and with much truth, that the medical profession is greatly overcrowded. But there is no avocation that is not in a similar condition. The legal profession is perhaps even more congested than the medical; and the ministry holds out few inducements to the best class of young men. In law, it is often difficult enough for a barrister of very fair ability to make a comfortable livelihood, whereas in the ministry altogether too many are struggling along in a hand-to-mouth existence, or have no charge at all.

So, if one turns to other callings, the same state is met with. In every line of business there are persons enough and to spare. The financial circles are done to death by those who are trying to make a living by speculations and the exercise of their wits. Taking the total number of medical men in any country, and a similar number of men from any other pursuit in life, and it may safely be said that the medical practitioners average as good incomes, and enjoy as many comforts and privileges, as any equal number of their fellow citizens.

In the professions and the various business pursuits, the same law holds good that is everywhere met with in nature, that the tendency of movement is in the line of least resistance. The migrations of the human race have been largely determined by the search for safety, the agreeableness of some climate, and the ease with which foods could be procured. The movements towards the respective avocations in life are decided upon somewhat similar lines of argument. As soon as it becomes clear to intelligent observers that the profession of medicine, from the physical, financial, intellectual, ethical, and social standpoints, holds out fewer inducements than other callings, so soon will there be a marked falling off in the numbers entering upon its study.

Those who are now members of the profession have no right to expect a monopoly of it. That it will, in the future, as it has ever been in the past, continue to be replenished by fresh and ample accessions, there is no doubt. To the man of fair health, average ability, becoming integrity and steady industry, there is a sure living in the profession of medicine. There is an absence of the reverses so often encountered in business. While it may

be true that the medical practitioner rarely accumulates much wealth, it is also true that he seldom experiences the worries and losses of those in commercial and industrial pursuits. Although only a small percentage of the medical profession become what might be called rich, yet very few fall below the level of substantial comfort. It may be said that professional incomes in this country run anywhere from $2,000 to $10,000 a year.

Daily there are being born into this world human beings, and daily death is claiming its full measure. Between these points, there is an endless variety of the diseases and accidents to which human flesh is heir. For the man of energy and ability, there is a constant field of employment. But with the increase of the numbers in the professions, and the control of many of the infectious diseases, the chances of large incomes are, on the whole, growing less. The profession is, after all, perhaps its own worst enemy. There is no quarrel with those noble and constant efforts to lessen the incidence of disease, such as the plague, typhoid fever, and smallpox, which cut out many a fee from the total income; but there is good ground for saying a word against some of the other ways by which medical practitioners are lessening their incomes, and lowering their status. Among these may be mentioned the vast amount of free treatment that is given under the guise of charity in the many hospitals and dispensaries. Then again there is the iniquity of lodge and contract practice. The laborer is worthy of his hire; and why should a doctor attend a lodge or club for half, or even one-fourth of what his services are worth. The desire to secure the lodge to out bid another practitioner, or in the hope of gaining an introduction to the families represented in these lodges, or for the immediate small addition to their incomes, may be the reasons in many cases for taking lodges, or contract practice. We have no hesitation in saying that it is a great mistake, and would urge upon the profession to look this evil boldly in the face and have done with it.

To those who are now pursuing their studies we would urge all diligence. There is much and arduous work to be done before the day of graduation. Nor does study there cease. The work done at college cannot be said to be more than that of acquiring a good working knowledge for the great duties of life:—

"Life is real, life is earnest,
Life is not an idle dream."

The broad ocean of professional knowledge and work lies before you Many there have been who have sailed upon its waters, searching for its rich but often deeply hidden pearls. The treasures of this ocean of thought and work are by no means exhausted. There are many

prizes yet to be secured. "Pallida mors æquo pulsat pede pauperum tabernas, regumque turres." There are for the profession the pathways that lead to the cottage and the palace: for death knocks at the gates of both. To the student of medicine the words of Goethe, poet, sage and writer, have a special meaning:—

The future hides in it
Gladness and sorrow;
We press still thorow;
Naught that abides in it
Daunting us—Onward!

Here eyes do regard you
In eternity's stillness:
Here is all fulness,
Ye brave, to reward you;
Work and despair not.

EDITORIAL NOTES.

Acute Dilatation of the Stomach.

T. Clifford Albutt, M.D., F.R.C.P., in *Medical Press and Circ.* of 6 Aug. has an article on the above subject. As to treatment he remarks that it must vary somewhat with the cause. Vertigo and lassitude after meals often depend upon distension, and may be relieved by regulating the diet, and restriction of fluids at meals. In sleepless cases, change of air and hydrotherapy do most good. In heart cases, the relief of an atonic dilatation is of the utmost value. These patients must not be allowed too much farinaceous food and sugar, as they ferment readily. Mastication must be carefully provided for, by regulation of the method of eating and attending to the teeth. Papain is a very useful aid to digestion. The abuse of corsets and belts must be corrected. Rest, both before and after meals, is important. A course of massage may be required, in some cases with emaciation. These patients must not expose themselves to excessive stresses and other causes of fatigue.

Pregnancy After Removal of Both Ovaries.

At a recent meeting of the Obstetrical Society of London, the above subject was fully discussed. Dr. Alban H. G. Doran reported the case of a woman who had one child. After this one ovary was removed. Subsequently she had four children. He then had occasion to remove the second ovary. She menstruated again and had one child. He reported two other similar cases. He expressed the opinion that some ovarian

tissue was left, and that one or both of the tubes escaped obliteration. Dr. Bland Sutton stated that tying the tubes did not necessarily cause sterility, as the continuity of the tube might be restored. He gave a case. Dr. Galabin also stated he had tied both Fallopian tubes, without success, to sterilize patents. He now tied the tubes in two places, and removed the sections between the ligatures, pulling out the stump and cutting it off close. Dr. Amand J. M. Routh thought that these cases of pregnancy, after the removal of both ovaries, were due to a portion of the ovary, usually of the hilum, being left; and that this became active, developing graafian follicles.

PERSONAL.

Dr. S J. Hopkins, of Port Colborne, dropped dead August 14th.

Dr. W. H. Bowles, of Orangeville and Miss Helen M. Snell were married at Bolton, 20th August.

Dr. J. J. Watters, of Winnipeg, and Miss Annie E. Puddicombe, of Haysville, Ont., were married 11th September.

Dr. George M. Hall, of Galt, has received $2,000 for his first aid to the late President McKinley when shot. We congratulate Dr. Hall.

Dr. Edgar, formerly Medical Superintendent of the Hamilton City Hospital, has commenced practice at 142 West Jackson St., Hamilton.

Dr. J. Colerjdge, of Ingersoll, and Miss Jackson, of Mimico, were married September 11th, at the residence of the bride's mother, in Mimico.

Dr. and Mrs. Albert A. Macdonald's daughter, Helen Augusta Beatrice was married to Mr. Campbell Reaves, on September 20th, in St. George's Church, Toronto.

Dr. Wm. Bayard, of St. John, N. B., celebrated recently his 89th birthday. He has been 66 years in practice. The hospital board of which he is chairman made him a presentation.

Dr. J. S. Tenaunt, one of the most widely known and popular physicians in the northern counties, died at Lucknow on Wednesday. Death came very suddenly. The doctor was in consultation with a brother physician at Ripley on Wednesday, 10th September. Driving home in the evening he complained of not feeling well, but nothing serious was anticipated. Cholera morbus, however developed and at six o'clock he passed away.

BOOK REVIEWS.

DISEASES OF THE SKIN.

A Treatise on Diseases of the Skin. For the use of advanced students and practitioners. By Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $6.00 net; Sheep or Half Morocco, $7.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

THIS book presents the practical part of the science of dermatology in a sufficiently full and complete manner to make the work one that will give the general practitioner a clear comprehension of the symptomatology, diagnosis, and treatment of the various affections with which he is most likely to come in contact. Diagnosis being the most difficult and confusing part of cutaneous medicine has been wisely accorded considerable attention. The elaborate remarks under General Diagnosis will be found of substantial aid in narrowing the diagnostic possibilities. Treatment has been detailed with unusual clearness and accurateness, the author, in addition to the remedies and methods used in his own practice, having referred frequently to those employed and advised by others.

But in stating that the book deals with the practical parts of dermatology, it is not to be understood that etiology and pathology have been neglected. These have been given entirely satisfactory consideration, and their treatment will be found a complete, but concise, reflex of our present knowledge. The clinical and pathologic aspects are further elucidated by a large number of very beautiful illustrations, mainly from the author's own collection, besides a number of colored lithographic plates of exceptional merit. Indeed, the work, though originally planned for the student and general physician, will be found of material assistance to the dermatologist, as presenting the most recent advancement in the subject.

The whole subject of dermatology is discussed under the somewhat simple,but common sense headings of Hyperæmias,Inflammations,Hæmorrhages, Hypertrophies, Atrophies, New Growths, Neuroses, Diseases of the Appendages, and Parasitic Affections. One can readily see that under such a simple classification it will be an easy matter to follow the author. One of the dreads of dermatology is the terribly complicated systems of classification so often encountered.

The pages devoted to the anatomy and physiology of the skin are of more than passing interest, and lay an excellent foundation for the

further study of the work. We would commend this portion of the work to the attention of all who are interested in the subject of skin diseases.

Then comes a section on the primary and secondary lesions met with in the study of skin diseases. Under the head of primary lesions there are careful descriptions of macules, wheals, papules, tubercles, tumors, vesicles, blebs, and pustules. Secondary lesions are described as excavations, fissures, scales, crusts, ulcerations, and scars.

Passing over general etiology, pathology, and diagnosis, we come to the remarks on general treatment. The first essential in treatment is a correct diagnosis. It would be quite inexcusable to treat tinea versicolor with mercury, under the belief that it is a syphiloderm. A proper diagnosis consists in arriving at the etiology and pathology of the disease as well as merely naming it. The author takes strong ground against the view that skin diseases should not be healed up too quickly. The putting the skin into a healthy condition will relieve the patient of annoyance and worry, but will conduce to his general well-being. For a time, due to the teachings of Hebra, Neumann, and Kaposi, the practice was to trust almost entirely to external remedies. The author takes just exception to this; and states that, while external remedies are required in most cases, the proper constitutional management is likewise important, and the maintenance of good health keeps up tissue-resisting power, and is a potent influence in rendering the cure permanent. Cutaneous weakness is often due to general ill-health, from organic or functional derangements of important organs. The skin is one of the four great emunctories of the body, the other three being the kidneys, the digestive tract, and the lungs. If the skin is deranged much of its work is thrown upon the others, and *vice versa*. The study of the constitutional side is highly important.

Among the general remedies must be mentioned tonics such as iron, manganese, arsenic, quinine, strychnia, acids, cod liver oil, etc. These are often very useful for the general indications present, such as anaemia, want of nerve tone, poor appetite, etc. Among the aperients, salines are very serviceable, except in the anaemic. The antacid magnesia is often very useful. Active purgation should as a rule be avoided. Cascara is perhaps the most useful of all the vegetable laxatives. In many eruptions, as urticaria, erythema multiforme, and some cases of eczema, due to auto-intoxication, the employment of gastro-intestinal antiseptics is very helpful. In many skin diseases, as eczema, psoriasis, inflammatory acne, dermatitis exfoliativa or herpetiformis, diuretics, and especially saline diuretics, are of the greatest utility. Alteratives, as the mercurials, the

iodine compounds, and the animal extracts. The value of mercury in syphilodermata is beyond doubt. The value of iodine in some strumous conditions, in the late stage of syphilis, and in actinomycosis, and blastomycitic dermatitis is well attested. It has also undoubted value in large doses in some cases of psoriosis. Antimony has been found of considerable value in inflammatory skin diseases. Of the animal extracts, thyroid is useful in myxœdema, psoriasis, and lupus vulgaris, and suprarenal in vitiligo. Arsenic is a remedy of great value. It acts on the nervous system and the skin. It improves the nutrition of the epithelium in a special manner. It is most useful in psoriasis, lichen planus, persistent dry eczemas, dermatitis herpetiformis, and pemphigus. When the cases are properly selected, it is a remedy of great value. It should not be given in the acute stage of psoriasis.

Some drugs taken internally have a germicidal action. This is the case with mercury and syphilis, and quinine and malaria. To these must be added the remarkable success of assafœtida in dracunculosis. Cod liver oil seems to have some such influence in skin diseases, apart from its nutritive qualities. Sulphur, owing to its exhalation through the skin, when given internally may also have an influence over cutaneous micro-organisms.

On the external remedies the author makes some interesting comments. As a general rule, in acute inflammatory diseases, notably in many cases of eczema, water is prejudicial, and its use should be restricted as much as possible consistent with cleanliness. Rain or boiled water is less irritating than ordinary water. In hyperaemic and acute diseases, and in chronic conditions, as dermatitis exfoliativa, and eczema, the water may be made more agreeable to the parts by adding an ounce, or more, of gelatin, starch, or bran to the gallon. In some chronic scaly diseases as ichthyosis, or psoriasis, the free use of water may be beneficial. The baths may be medicated with sodium bicarbonate, sodium borate, potassium carbonate, or ammonium muriate one dram to the gallon. In some chronic sluggish dermatoses, a bath, containing one dram of sulphur, or potassium sulphide, to the gallon, is useful.

With regard to soaps, there are two main varieties: the soda soap, of which castile is an example; and the potash soap, as green soap. Soda soaps should be as nearly neutral as possible. Such soaps must be used with great care on persons with a thin epidermis, or sensitive skin. If the skin is at all sensitive, the washing with the soap should be done at bed time. Superfatty soaps are made to overcome the irritation of the alkali. A strong soda soap is of use in acne. Sapo mollis, or green soap, is a strong soap, and should not be used in acute or subacute conditions.

For the removal of scales and crusts it is often valuable; and also in some cases of acne, seborrhœa, and psoriasis of the scalp.

On lotions there are some very appropriate remarks. It is stated that they are most frequently applicable in acne, urticaria, pruritus, erythema intertrigo, and some cases of eczema. The drying effect of lotions can be lessened, or abolished by adding from 1 to 10 minims of glycerine to the ounce. From 5 to 10 of alcohol may be added for the pleasant, cooling sensation it produces. These additions should not be in larger quantities than the above as they may become irritating. A favorite lotion recommended is the calamin-and-zinc-oxid lotion, consisting of about 1 or 2 drams each of calamin and zinc oxid to 4 ounces of water, or of 2 ounces each of lime-water and plain-water. To this may be added a few drops of carbolic acid and glycerine to each ounce. This lotion is particularly valuable in acute erythematous and vesicular eczema, erythema intertrigo, and other irritable conditions of the skin. If it is desired to render the lotion more antiseptic, 5 to 15 grains boric acid may be added to each ounce. Among other lotions may be added the indispensable ones of boric acid, and black wash diluted one-half with plain water or lime water.

Ointments are the most frequently employed preparations in skin diseases. In many cases they are the most valuable. The best ointment bases are: (1) Prepared lard, which is the best all-round base, possessing penetrating qualities scarcely exceeded by any other fat; (2) Petrolatum, vaselin, or cosmolin are valuable, as they have good penetrating powers, and do not readily change; (3) Cold cream (unquentum aquæ rosæ) is soothing and cooling, and is an admirable base when well made, and may be used if other fatty applications disagree. Among the best of the soothing ointments are: oxide of zinc, cold cream, simple ointment, cucumber ointment. The stimulating ointments are those containing sulphur, tar, white precipitate, calomel, resorcin, salicylic acid, chrysarobin. Much care should be taken that salves are not rancid.

The above are only a few of the many excellent suggestions throughout the work. Of the entire work, it may be said there is not a disappointing page. The book is published in splendid form. The illustrations are of very high merit. On the whole, the work is a very superior one.

CELLULAR TOXINS OR THE CHEMICAL FACTORS IN THE CAUSATION OF DISEASE.

By Victor C. Vaughan, M.D., LL.D., Professor of Hygiene and Physiological Chemistry and Director of the Hygienic Laboratory in the University of Michigan; and, Frederick G. Nory, M.D., Sc. D., Junior Professor of Hygiene and Physiological Chemistry in the University of Michigan. Fourth Edition, Revised and Enlarged. Lea Brothers & Company, Philadelphia and New York; $3.00 net, 1902.

IN 1887, the first edition of this work appeared, under the title of "Ptomaines and Leucomaines, or Putrefactive and Physiological Alkaloids." About 1891, the third edition appeared with the title, "Ptomaines, Leucomaines, Toxins and Anti toxins." The present, fourth edition, bears the more modern and accurate title of "Cellular Toxins, or the Chemical Factors in the Causation of Disease." We think this change of title a distinct advance in the right direction. The effects of the various toxic products, produced by germs, by the organs of the body, or by the retention within the system of waste material, are far reaching on the cells of the body. Cell poisoning is an important question in pathology.

In the etiology of disease, the authors speak of (1) the bacterial, where microscopical forms of vegetable life enter the system and produce special poisons; (2) the fungous diseases, where a vegetable organism again is the cause, but one that injures the part affected, usually the skin, without producing a poison; (3) single-celled animal organisms invade the body, impairing the parts affected, and giving rise to the protozoal diseases; (4) more highly organized animals, passing a portion of their existence on another animal, and giving rise to the parasitic diseases; (5) many poisons, generated outside of the body, may be taken into the body, causing intoxications; (6) diseases due to injuries of any organ, or the traumatic; (7) the cells of our organs may fail in their work and poisons be the result, or states of auto-intoxication arise—the autogenous diseases.

How do germs cause disease? This has been answered in a number of ways: (1) by depriving the tissues of oxygen; (2) by filling the small vessels with emboli, formed from the germs; (3) by consuming the proteids; (4) by destroying the red blood corpuscles; (5) the production of chemical poisons. This last is the true theory. Microörganisms may produce from themselves soluble chemical ferments, or produce ferments by splitting up the proteids of the body, or by producing some alkaloid, as the cells of the poppy produce morphia.

In studying bacteria it is necessary to remember that some are pathogenic while others are exclusively toxicogenic The pathogenic will live in the animal body and produce poisons, give rise to disease

with symptoms during life and post mortem changes. The toxicogenic do not live in the animal body, but may in a suitable medium, as milk, and form most virulent poisons, which, if taken into the body, would prove most injurious. Bacteria form two main classes of chemical products—ptomains and toxins. The former will unite with acids and give rise to salts. These ptomaines may, or may not, be poisonous. Toxins on the other hand are not basic, and are always poisonous. These poisons are produced by synthisis in the protoplasm within the bacterial cell-wall; and not by analysis in the culture media in which the bacteria are growing.

There is a very interesting and able chapter on the germicidal property of the blood serum. The following conclusions are arrived at:—(1) the exact nature of the germicidal constituents of the blood, or alexins, is not known; (2) the alexins have their origin in the white blood corpuscles; (3) disintegration of the white blood corpuscles liberates alexins; and (4) it is probably true that alexins are also secreted by living leucocytes. Strong arguments are advanced to prove that these alexins of Buchner are composed of nucleinic acid which is shown to exist in the blood, and to come from the white corpuscles. A given volume of blood possesses the power to destroy only a certain number of bacteria. This is called its maximum power.

An important chapter is devoted to lysins, or what is known as Pfeifler's phenomenon, or bacteriolysis. It has been shown that if bacteria are put into the peritoneal cavity of an immunized animal, these bacteria swell up and break into small granules, and become dissolved. If a mixed infection be introduced, only the bacteria against which the animal is immunized will thus disappear, the others remaining and growing. This whole question is discussed with much clearness.

Immunity, as it deserves, receives much attention. This is treated of as, (1) natural immunity when the animal has no liability to a certain infection; (2) as inherited immunity, where the fetus through the placenta, or the milk, is protected against an infection; (3) acquired immunity, which may be active if the bacteria live in the body and produce antitoxins in it; or passive, if serum, containing antitoxins, is injected into another animal, until it is protected. This is what happens when the horses' serum, containing diphtheria antitoxin, is injected into the child.

In cases of natural immunity the germ cannot thrive in the body, but may produce a toxin that is capable of causing severe symptoms, or death. The bacillus pyocyaneus is often found on man's body, but seldom affects him, though he is very susceptible to its toxin. In the same way

the micrococcus prodigiosus is not pathogenic to man, but he is readily affected by its toxin. The opposite of this is true in some cases. The healthy man is not affected by tuberculin, the toxin, but is readily so by the germ. The natural power of some animals to resist the tetanus infection can be overcome by injecting the animal with a mixed infection. It has been shown that this natural immunity is not due to the alexins in the blood. It is most probable that the phagocytes have much to do with natural immunity, aided by a special power of attraction for certain germs called chemotaxis.

In attempts to secure acquired immunity the following agents have been tried: (1) Treatment by weakened cultures of the germ; (2) the employment of sterilized cultures of the specific microörganism or by the use of its toxins; (3) by treating the animal with the specific organism mixed with other bacteria. Often first, we have a good example in the case of chicken cholera, where the germ loses its virulence by being grown for successive generations. So in snake venom, immunity is obtained by frequent injections of weak, non-fatal doses. In the Pasteur treatment of hydrophobia it is no doubt true that the dried cord contains an attenuated form of the poison, and that the employment of this gives immunity during the period of incubation, when the treatment should be commenced.

Much attention is given to the possibility of bacteria producing certain enzymes that have the power of digesting the germs from which they came. This seems to be proven by the facts that: (1) in liquid cultures the bacteria cease to grow after a time; (2) some of these enzymes digest other germs as well; (3) the curative value of cultures is due to these bacteriolytic enzymes; (4) the production of artificial immunity is due to the formation in the body of a compound of the enzyme with some proteid; (5) agglutination is the first stage of the bacteriolytic action of the enzymes; (6) the bactericidal action of normal blood is probably due to enzymes. By treatment the blood serum acquires bactericidal or antitoxic properties. This immunity may be against the germs, or their toxins. The serum of an immunized animal has the power to inhibit the growth of the homologous bacterium. The bactericidal, or agglutination action of the blood serum militates against the growth of the germ.

The subject of immunity to bacterial toxins is well explained. Much attention is given to Ehrlich's side chain theory. According to this theory, small doses of the toxin stimulate certain corpuscles until they become so active that they throw off bodies that seize upon the toxin bodies. These bodies in the blood are called toxophils, or antitoxins.

They form harmless unions with the toxins. When the blood contains a large number of these toxophil bodies, the animal is immunized to the toxin of the given germ.

Chapters follow on food poisons, ptomains, and leucomains. Although no attempt is made to review these, they are of extreme interest, and contain much information on the poisons found in foods, formed by bacteria, and by the cells of the body. Leucomains are basic substances which exist in the proteids of the body, or in the products of tissue metabolism. Ptomains are the result of the action of bacteria in splitting up the proteids. They are the result of the breaking down of proteids and are anlytic. Leucomains are prepared in the proteids, and are not the result of bacterial activity.

The last chapter in the work is on the very important subject of "Autogenous Diseases." The cell and its functions play an important part in auto-intoxication. Cells are grouped together to form organs. The cells of the liver do one sort of work, while those of the stomach do another. Failure in one group leads to derangement and failure in other groups. There is no exception to the statement the excretions contain poisonous matters, which act injuriously on the organs of the body, if they are not gotten rid of. These poisons originate in the complex changes that take place in the splitting up of the organic molecule into simplex compounds. This breaking up takes place until the end products, urea, ammonia, water, and carbon dioxide are reached. Leucomains are of cellular origin, and many of them contain hydrocyanic acid. It matters not how these proteids may be broken up, poisons may be found.

Among the metabolic changes in the animal body there are substances which are more or less toxic in their action. By the term autogenous is meant that the materies moibi arise in the cells of the body, and not from some cell or germ infection, or poison introduced from without. Great care must be taken not to confound true autogenous diseases with disease that are really secondary to some cause from without. For example, the excessive use of alcohol may cause cirrhosis of the liver, and this result in faulty action of the liver and the poisoning of the system. Some contend that even the cirrhosis is autogenous,as the alcohol deranges the stomach, from which there is absorption of imperfectly digested substances, to which the cirrhosis is due.

Auto-infection must not be confounded with auto-intoxication. In the case of pulmonary tuberculosis, the person may swallow the sputum and thus cause the disease to appear in the digestive organs. This would be an example of auto-infection. The poisoned state of the blood in a case of cirrhosis of the kidneys would be an example auto-intoxication. Among the forms of auto-intoxication the following may be mentioned:

(1) The digestive organs may perform their work imperfectly, and undigested products find their way into the system. These products will fail to nourish the tissues of the body, and may act as irritants as well.

(2) Some of the secretions and excretions of the body are poisonous when brought into contact with tissues to which they have no normal relation. Normal bile will digest the cells of the pancreas, but has no such effect on the cells of the liver.

(3) It is the duty of certain organs to prevent the entry into the system of some deleterious matters. Thyroid gland may act this way. When normal it prevents the introduction into the tissue of an excess of mucous, the condition found in myxœdema. In like manner the liver separates the bile from the fluids circulating through it.

(4) The retention within the system of products that should be eliminated may cause disease. The absorption of retained effete matter from the intestines, of substances which the kidneys should excrete, and the absorption of bile in jaundices are instances.

(5) Certain cells in the body, at some periods of life, fall out of harmony with other groups of cells. This may happen at puberty, the climacteric, etc. When these cell groups no longer work together auto-intoxication may result.

(6) Under some conditions,certain cells fail to utilize some forms of foods. In diabetes, the cells that absorb and utilize sugars are no longer able to do this. The sugar acts as a poison in the system.

(7) Some of the cells in the body produce energetic poisons under certain conditions. Oxy-butyric acid, methyl mercaptan, hydrogen sulphide, and leucomain alkaloids belong to this class. It has only been possible to indicate a few of the excellent features of the book. The authors are to be heartily congratulated upon the results of their labors. They have produced a work that ought to be in the hands of every practitioner. There is nothing else to take its place.

The publishers have done their part well. The paper is a great improvement on the hard, stiff, glazy paper so often used in medical books.

CORRESPONDENCE

The editor does not endorse nor hold himself responsible for the opinions expressed by correspondents.

BRANTFORD, Ont., Sept. 15th, 1902.

Editor CANADA LANCET:

DEAR SIR,—In the September number of your journal is a letter from the pen of Dr. L. S. Oille of St. Catharines, in which he laments the fact that "not a work is mentioned in the annual announcements of the

Canadian Medical Colleges written by a professor in any of those colleges." While joining in Dr. Oille's regret at the paucity of Canadian medical literature, I would humbly submit that the above statement is somewhat inaccurate, and as proof would refer to the list of text books given on pp. 96-97 of the calendar for 1902-1903 of the Medical Faculty of McGill University, where in physiology, the well known "Text-Book of Animal Physiology," written by Dr. Wesley Mills, Professor of Physiology in that institution, is the recommended work. Again in surgery the "American Text-Book of Surgery" is recommended, and readers of thi work will remember with pleasure the article on "Hernia" from the pen of Dr. Francis J. Shepherd, the distinguished Professor of Anatomy at McGill.

Moreover what Canadian practitioner does not regard with pride the fact that, though Dr. Osler is no longer a Canadian professor, his work on the Practice of Medicine is in a large extent the embodiment of his experience gained in the wards of the Montreal General Hospital. Let us not, then, take too pessimistic a view of the matter, since these three examples show at least that experience gained in Canadian hospitals is more than sufficient for the ground work of scholarly writings.

Yours truly,

E. R. SECORD.

MISCELLANEOUS.

THERAPEUTIC EXPERIMENTS WITH SALOQUININE.

E. HOENIGSCHMIED, M. D., Weistrach, in the Aerzliche Central-Zeitring, No. 26, 27, 1902, writes that Saloquinine is a combination of quinine with salicylic acid, and differs essentially from the salicylate of quinine in its composition and effects. Its formula is:

$$C_6 H_4 OH\ CO\ O\ C_{20} H_{23} N_2 O.$$

It forms white crystals which are insoluble in water and are completely tasteless.

I have had occasion to test saloquinine in sciatica, menstrual colic, nervous headaches, and acute and subacute articular rheumatism.

In a case of chronic sciatica doses of 30 grains, twice daily, produced no material relief, and were therefore given three times daily. The action of the new drug was increased if given in a cup of tea with the addition of a little rum. Within a short time a feeling of comfort manifested itself, accompanied by a gentle perspiration, which was followed by a subsidence of the pains. On the second day of its administration a very slight salicylic acid and quinine effect made itself manifest. After the third day the remedy could be given in weaker doses, 15 grains, twice daily, after which the by-effects subsided.

In the second case of chronic sciatica in which the patient had been confined to bed for six months, the action of the drug was really surprising. As the pains were most violent at night and prevented the patient from sleeping, I ordered 30 grains to be administered at five o'clock and the same quantity at nine o'clock in a cup of tea. Soon after taking the second dose slight perspiration and a diminution of the pains occurred, and the patient obtained a quiet sleep during the second half of the night. The subject of this case was a man, 45 years old, who was much reduced in health, emaciated, and anemic. The affected leg was much weaker than the right. He had no appetite and suffered from protracted constipation. The pulse was 130 per minute; temperature 36.6 C. He complained of a feeling of heaviness in the head. On the following day I ordered saloquinine to be continued in the same dose and also prescribed podophyllin with cascara and rhubard in order to regulate the bowels. The pain was less violent than before and of shorter duration, and the patient slept well during the night. He had a movement of the bowels, but the appetite was still completely lost. On the third day of treatment some tinnitus and deafness were present, but not as violent as after the use of salicylic acid or quinine. On this account instead of 60 grains daily only 30 grains were administered in the evening about eight o'clock. This dose sufficed to prevent the recurrence of the violent pains, although traces of them manifested themselves during the following fourteen days. After the remaining pain had been reduced to a minimum the dose was decreased to 15 grains daily, which was continued for eight more days. The tinnitus and deafness, however, did not disappear until three days after discontinuing the drug. To stimulate the appetite and remove the anæmia condurango and iron were administered, and under this treatment the patient gradually recovered.

The third case of sciatica was that of a woman, 32 years old, who stated that she frequently suffered from this malady, the attacks lasting several weeks at a time. She was of vigorous build, and, aside from the attacks of sciatica, which occurred several times a year, she always felt well. When this patient came under my care she had been confined to bed for four days, and during the last two days menstruation had appeared and was quite profuse. As the pains appeared only at night, I ordered 15 grains of saloquinine to be taken at four o'clock in the afternoon and nine o'clock at night. At ten o'clock the backache and sciatic pains had subsided, and the patient passed a good night. The menses were quite moderate on the following day and free from pain. During the evening saloquinine was given in the same doses as before, and the recurrence of the pains was almost completely prevented. This led the patient to believe that she was cured, and she therefore failed to take

the drug on the third day. In the evening at 9.30 she had another attack of pain, and immediately took two powders, which afforded relief in the course of one-half hour, although during the night she was restless. The next two days she took 60 grains, and then for three more days 30 grains, after which a cure resulted.

Some very satisfactory results were obtained in menstrual disorders. After a dose of 30 grains the violent sacral pains subsided in the course of one-half hour, and the hæmorrhage became less profuse than before. Sometimes the dose had to be repeated once or twice, but in many cases a single administration was sufficient. The drug is decidedly beneficial in profuse menorrhagia, whether attended with menstrual colic or not. In profuse hæmorrhages it is my custom to administer 30 grains, morning and evening, for three days, and keep the patient in bed. Of course, hot and stimulating foods and drinks must be entirely avoided.

In trigeminal neuralgia saloquinine also proved of service in doses of 30 grains, twice daily.

Contrary to the observations of others who stated that they had never noted the by-effects of quinine and salicylic acid during its use, I have always observed under doses of at least 60 grains slight deafness and tinnitus on the second day. The remedy is certainly destined to be utilized extensively as an antineuralgic.

Although saloquinine is absolutely tasteless I have always prescribed it in wafers, since it is insoluble in water.

EXPERIMENTS WITH ADRENALIN.

ELSBERG, in *American Medicine*, gives a very comprehensive report of a series of experiments with adrenalin chlorid as an addition to solutions for local anesthesia. He says: "Adrenalin chlorid, which is the active blood pressure-raising principle of the suprarenal gland recently discovered and investigated by Dr. Takamine, is now on the market as an amorphous crystaline powder or in the form of a 1-1000 solution. It is a powerful astringent, so that a drop of a 1-10,000 solution will blanch the conjunctiva in from 30 to 60 seconds.

"Elsberg has been carrying on a series of experiments with this new drug and finds that if a drop of a 1-1000 solution be injected under the normal skin a slight burning sensation is felt but no anesthesia occurs. Within one minute an area of skin about two inches in diameter becomes blanched and almost bloodless and remains so from six to twelve hours. The same effect will be observed if a 1-500 to 1-15,000 solution be used, but with these weaker solutions the blanching appears only after a few minutes and disappears after three to six hours. After the blanching of the skin disappears the tissue apparently returns to its normal condition, No deleterious effects such as sloughing or subcutaneous ecchymosis ever

followed these injections. In the course of the investigations cocain and eucain solutions containing adrenalin the proportion of 1-5000 to 1-20,000 were used. It was found that the anesthetic properties of the cocain and eucain were preserved while the adrenalin caused the same blanching of the tissues as previously observed, which extended one to two inches beyond the area infilterated.

"In performing minor operations under cocain to which 1-5000 to 1-20,000 adrenalin had been added only the larger vessels bled when cut across. The smaller vessels were contracted so tightly that no blood could escape from them and therefore there was no oozing. It was unnecessary to sponge off the wound a single time during an operation. The healing of the wound was not interfered with in any way. Upon theoretical grounds it was expected that secondary hemorrhage would take place in from three to twelve hours as the effect of the drug passed off. This, however, has not been the case in the 30 cases operated upon. Experience with the drug is still small, and what will be the result in operations upon larger wounds remains to be determined.

"For small operations the addition of adrenalin chlorid is of distinct advantage in that it raises the blood pressure and overcomes the depressing effect of cocain, at the same time it entirely does away with the oozing of blood from the wound."

In genito-urinary work the writer has used adrenalin. It checks hemorrhage, but in several cases it was followed by secondary hemorrhage, rather free. Its use is now limited to circumcision in very young infants, and it is there applied in very weak solution when the open method is used.

HOW SERA ARE MADE.

ON account of their importance in materia medica, many articles have appeared in the medical press regarding the therapeutic value of Biologic products, especially the Antitoxic sera, but relatively few giving in detail the process of manufacture. These are however, of interest to the physician.

Of first importance is the scientific skill and care that must, from the very nature of the products, surround every step in their preparation.

As Anti Diphtheritic serum has reached the highest state of perfection, and the results following its use have been so positive and uniformly successful, we will give the methods used at the present time to secure the same.

The first step in the process, is the securing of a pure Toxin producing diphtheria germ. This is done by rubbing a sterile swab over the

membrane in the throat of a child, suffering from the disease. The swab is then transferred to a tube of culture media containing Loefflers blood serum mixture (which is made by mixing blood serum with beef bouillon and a small amount of glucose and sterilizing.) This tube and swab is then placed in the incubator which is kept at 37° Centigrade and allowed to develop from twelve to eighteen hours when it is taken out and examined microscopically. If found with other bacteria present as is usually the case, it is purified by Plating on gelatin media from which the diphtheria colonies are picked with a sterilized platinum wire, and transferred to flasks containing beef bouillon (made from prime lean beef with peptone and salt added and made alkaline by the addition of Sodium Hydrate).

These flasks are also put in the incubator at 37° C. and remain for seven to fifteen days. At the end of this time they are removed and examined to insure the purity of the culture. If found pure a small amount of Trikresol is added as a preservative.

The bouillon which contains the toxin is now tested for strength on guinea pigs to determine the minimum fatal dose for a guinea pig of known weight. After this is complete the toxin is ready to be injected in the horse.

The horse is another important factor in making serum. Animals five or six years old are selected by a Veterinarian to insure their healthy condition, but to be doubly certain, they are injected with Tuberculin and Mallein to see that they are free from any latent form of Tuberculosis or Glanders.

After all these precautions have been taken they are given an initial injection of the toxin which usually causes a rise of temperature and other symptoms which subside in a few days. When the animal has completely recovered he is again injected with an increased amount of toxin. This process is repeated again and again until at the end of five or six months the horse is immunized, taking many hundreds of times the amount of toxin given at the first injection.

Now the horse is bled from the jugular vein by inserting a trocar and allowing the blood to flow into sterile containers. These containers are placed in the refrigerator where the serum separates—and is syphoned off into sterile bottles and Trikresol added as a preservative.

It is now ready for the test for Antitoxic strength and bacteriological and physiological tests. The first is made by giving guinea pigs one hundred fatal doses of toxin and a small amount of the serum from an immunized horse. Depending on the amount of serum necessary to protect the guinea pig from death the number of antitoxic units is calculated.

The bateriological test is made by making plants into various kinds of media and the physiological by injecting guinea pigs with large amounts of serum. If the antitoxic strength of the serum is up to the standard and the two other tests negative, the serum is filtered and ready to be put up in bulbs, labeled with the number of units contained in each. The process of making Antistreptococcic serum is practically the same as for diphtheria, the only difference being that live or attenuated cultures of the streptococcus organism are used.

To Messrs. Frederick Stearns & Co., who have one of the most modern and thoroughly equipped laboratories for producing sera, vaccine, etc., specially constructed for this purpose, belongs the credit of having produced a serum of the highest quality, and having placed it on the market in a hermetically sealed bulb of such form that it may be converted at once into a perfectly sterile syringe by simply breaking the ends of the bulb and attaching a sterile needle and rubber bulb, each of which accompanies every package.

FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

To those who intend taking part in the International Medical Congress, to be held in Madrid in 1903, the following terms of travel have been arranged: Railways in France and Spain, 50 per cent. reduction; the Spanish Transatlantic Company, 33 per cent.; and the general Italian Navigation Company, 50 per cent., exclusive of meals. Those who intend contributing papers should communicate this fact to the general secretary at Madrid by the first of January, 1903, or to Dr. J. H. Huddleston, 126 West 85th Street, New York.

JOURNAL OF ADVANCED THERAPEUTICS.

Electro-Therapeutics, Radiography, Thermo and Hydro-Therapeutics are practically and thoroughly covered in the Journal of Advanced Therapeutics 800 pages, issued monthly, $3 per year.)

The reader is invited to join the "Founders" Club, and to all who order during 1902 the price is $2, for the first and *each succeeding* year. It is only requisite that you address following order to "Advanced Therapeutics," 156 5th Ave., New York. Send me until countermanded (to Dec. 1902 free) the Journal commencing Jan. 1903, per year $2., for which I will pay at the close of the year.

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ON THE IMPORTANCE OF EARLY OPERATION ON THE GALL BLADDER.*

By DUDLY P. ALLEN, A.M., M.D.,

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IT would be easy to decide upon the method of procedure in treating diseased conditions of the upper abdominal cavity were the diagnosis clear. Unfortunately the diagnosis often is extremely difficult and doubtful. If the difficulty in diagnosis leads to delay in the employment of proper methods of relief, and this delay results in complications which render the delayed methods more dangerous and less effective, there are certainly urgent reasons for us to seek early methods of diagnosis and treatment.

I think I shall best show my appreciation of the courteous invitation of your President to speak to you to-day by condensing what I have to say into a few words. I shall not, therefore, enter upon an exhaustive discussion of my theme, but shall confine what I have to say to a short statement of conclusions based upon my own clinical experience. In doing this I shall cite a few cases selected from many, simply as illustrations. The difficulties of diagnosis pertain chiefly, in the first place, to uncertainty as to the presence or absence of malignant disease, whether of stomach, gall bladder or liver; second, to uncertainty as to the presence or absence of gall stones or inflammatory conditions of the biliary tract; and third, to the association of inflammatory adhesions which may result from certain of the foregoing diseased conditions. I shall not consider acute inflammation of the pancreas nor cysts of that viscus or of the lesser omental bursa, interesting as these may be. I shall omit also a consideration of diseased conditions of the stomach associated with gasterectasis, whether resulting from carcinoma, non-malignant stricture of the pylorus or other causes whatsoever. If these cases are malignant, diagnosis is usually too late to make operation of benefit, and if non-malignant I am of the positive opinion that such cases should be referred to our medical confréres, who now accomplish so much by lavage, proper diet, medication, rest and recreation. It is time

* Read at the Canadian Medical Association, Montreal, 17th September, 1902.

enough to consider operation for gastro-intestinal anastomosis after properly directed treatment has proved ineffectual. To return then to the limited theme which is proposed for consideration, what are the difficulties of diagnosis in conditions suggesting the presence of malignant disease of the pylorus, biliary tract, or liver? Repeatedly, cases have been brought me with a diagnosis of carcinoma of the stomach, abandoned as hopeless, upon which I have operated with complete recovery.

An interesting case was one upon which I operated in 1893. The patient had suffered from indigestion and from epigastric pain for a number of years. The case was abandoned as one of carcinoma and was brought to me only for the satisfaction of the family. A positive diagnosis was impossible, but it seemed to me desirable that an exploration should be made. Upon opening the abdomen I found a gall bladder distended and from it removed a large number of small and three very large calculi. I saw the patient recently and since the time of the operation she has enjoyed good health aside from the fact that she still has some digestive disturbance. One of the most interesting cases in this connection which I have met was that of a woman upon whom I operated in 1900 for carcinoma mammæ. I was called to see her again in May of this year. At that time she was complaining of pain in the abdomen, there was slight jaundice and although the conditions were such as to render a diagnosis uncertain, I suggested the propriety of an exploration, since I was suspicious that a gall stone might be present. The factor of uncertainty in this case was that having been operated upon for an unquestioned carcinoma mammæ one would have naturally suspected the presence of a secondary malignant growth of the liver. The patient did not accept my advice and died about two months later.

At the *post mortem* examination it was found that the patient had a large gall stone which by pressure had ulcerated through the gall bladder and had thus caused death. There are other cases in my experience in which diagnosis has often proven more difficult than in the one just mentioned.

A patient was brought to me having a mass in the epigastrium, markedly jaundiced, and presenting conditions which pointed strongly toward carcinoma. There were certain features in the case, however, which led me to think an exploratory incision wise. This was made and, upon opening the abdomen, a large mass was encountered and the adhesions were so dense that it was impossible to separate them. The patient's condition was extremely feeble, so that I felt any more extended examination of the mass than that which was made would in itself be more than the patient could endure. The operation was,

therefore, abandoned, the diagnosis being carcinoma. The original operation was made on November 16, 1898. Contrary to all expectation the patient gradually improved and the jaundice disappeared and she was restored to health. A few months ago she again felt a little pain in the epigastrium with some recurrence of jaundice. The lapse of time had been sufficient to negative the diagnosis of carcinoma and I consequently decided to open the abdomen again. I did so on August 12, 1902, and again encountered adhesions. The adherent mass was smaller, however, than at the first operation. The patient being in vigorous health at this time I separated the adhesions, forced my way down to the gall bladder which I found much contracted, with thickened walls and on opening it I removed from its cavity ten small gall stones. I was able to separate the adhesions so as at length to get my finger into the Foraman of Winslow and explored the whole of the biliary tract, and was thus able to exclude other diseased conditions. This case had been to me one of the most interesting in my experience. Had the first operation for exploration been undertaken earlier when the patient's condition was such as to have rendered a more prolonged operation possible, of course she would have been relieved at that time, but it is not infrequent that one is forced to undertake operations in which the only hope depends upon the rapidity with which it is performed.

Explorations under such circumstances, if too prolonged, or severe, usually result in death and consequently are not permissible. These illustrations seem to me sufficient to demonstrate the desirability of early exploration. The interesting fact is that in all the cases mentioned the complex of symptoms has not been those supposed to be characteristic of gall stones. Unquestionably, explorations under the conditions described will result in demonstrating the presence of malignant disease in a certain proportion of cases, but in as much as the exploration can be of little detriment to such patients, little can be said against the procedure.

The second proposition pertains to the presence or absence of gall stones in cases in which malignant disease may be excluded with fair certainty. Patients may have for years complained of discomfort in the epigastrium. There may have been at no time colic, suggesting gall stones, and jaundice if present may have been so slight as not to have attracted the patient's notice. The most striking case of the sort which has come under my notice is that of a patient on whom I operated a number of years ago for urinary calculus. Three months later I was called to his house to find the patient in collapse from which he died in

a few hours. Three days previously he had been seized with severe pain in the epigastrium, which was so severe that he fainted away. Physicians in attendance had been unable to make a diagnosis. At the *post mortem* I found an enormously distended gall bladder containing several hundred small stones, while in the cystic duct there was a small impacted stone. The hepatic and common ducts were free. The case is of interest in several ways. Having operated upon the patient for stone in the bladder not long before, and having inquired carefully into his symptoms, it seems impossible that he could have suffered seriously at least from the gall stones which already must have existed in large numbers. Had he done so I certainly should have elicited the fact. Another factor of interest is the sudden onset of pain and the extreme severity of it in a patient who had not previously suffered from biliary colic, even though there were hundreds of stones in the gall bladder. The gall bladder was also distended and was the most tense of any which I have ever encountered. I might mention many other cases in which gall stones have been found at operation, in none of which cases were there present characteristic symptoms of gall stones such as marked jaundice, clay colored stools, spasmodic pains, or vomiting. At most there was a long continued sense of discomfort in the epigastrium, perhaps the faintest discoloration of the sclera, and urine a little more highly colored than normal, which on examination was found to contain traces of bile.

On the other hand, I have operated repeatedly upon cases having all the characteristic symptoms of gall stone in which none have been found. Exactly the origin of these cases is difficult to determine. A distention of the common duct, acting much as a diverticulum of the oesophagus, suggests itself as a possible cause of the symptoms. At any rate, such cases are relieved by drainage of the gall bladder with traction upon its walls, the gall bladder being fixed by sutures to the incision in the adbominial wall. Following this procedure there is the re-establishment of the flow of bile into the intestines,and I have had the good furtune repeatedly to have such patients entirely recover. Whether stones be present, or whether the symptoms be due to the obstruction to the flow of bile without the presence of stones, is immaterial since the condition is equally serious in the latter and is equally benefitted by operation.

The third consideration is the most important, viz., what complications may arise from delayed operation? The most important of these are inflammatory adhesions. The extent of these may be extreme and may bear no proportion to the number or size of the biliary calculi or to the length of time that symptoms have existed. The most striking case

of this sort I have ever seen was that of a man upon whom I operated in October of 1892.

Fifteen years before while engaged in excavations in Georgia he had a severe attack of malaria, and while there passed a gall stone. The patient returned from the South after three years and did not pass another stone for three years. He then commenced passing stones at intervals of from every few months to a year. He was a man over six feet in height of powerful physique and normally weighed over 200 pounds. When I saw the patient in Oct. 1892 he had lost greatly in weight, was markedly jaundiced and very feeble. I suspected gall stones were the cause of the difficulty and told him that his condition was so far advanced that an operation seemed to me to be well nigh hopeless. He decided, however, upon operation. I will not describe this case in detail, but use it as an illustration which has come in my experience. The adhesions were the most dense I have ever met, the most determined efforts to reach the biliary passages meeting with failure. I tore the adhesions until I feared I should tear into the portal vessels but could find nothing in the biliary tract, the only thing which guided me being a small nodule which I thought was a stone. In manipulation this disappeared and I could find it no more and finally abandoned the operation. To my surprise the patient not only recovered from the operation but recovered absolutely from all symptoms of the disease and has remained in absolute health from that time until the present. The dislodging of the gall stone was doubtless the cause of the improvment.

The occurrence of dense adhesions is a complication which I have met very frequently. They occur with stones in the gall bladder, the cystic, and also the common duct. They add enormously to the difficulties and dangers of operation, and render what is under other circumstances a relatively safe operation, one of extreme risk. I should say, therefore, that the most common complication in inflammatory conditions of the biliary tract is the occurrence of adhesions. It is impossible, however, to tell in advance whether adhesions may be present or not. In several cases of long standing disease, with evidence of stone in the common duct, I have been able to reach the common duct without great difficulty, have opened it, removed a stone, sutured the incision and drained the gall bladder, and under these circumstances have seen the opening in the duct heal per primum. Unfortunately, when adhesions exist in connection with a stone in the common duct, they render operation extremely difficult. I have been forced to open the common duct upon its posterior aspect with a bistory, guided by my finger, after I have been compelled to abandon every other method of reaching the

stone. One of the gravest complications which is associated with inflammatory conditions of the biliary tract and with gall stones, is that of suppuration. Usually, the symptoms of suppuration are such as not to be mistaken, but at times suppuration may occur in some insidious way. A few years ago, I published a paper giving an account of five cases of suppuration of the gall bladder occurring during about five weeks of practice. Of course this was an unusual series, but the condition is one which I have encountered many times, and it is one of extreme gravity. The patients are usually in a condition most unfavorable for operation. I have found the condition associated with multiple points of gangrene of a gall bladder which was just on the verge of perforation; I have found the stones after rupture when they had escaped together with the pus into the abdominal cavity; I have found gangrene of the gall bladder from the pressure of the stone upon its walls; and I have encountered cases of suppuration with great thickening of the gall bladder without the presence of stone. Usually, the symptoms of rupture are associated with so grave a degree of collapse and symptoms of peritonitis as to render the diagnosis positive. There are cases, however, in which the gall bladder is perforated without the evidences of perforation becoming apparent. I recently cared for a case which had shown repeated evidence of gall stones. When I saw him, he had just returned from a journey to Kansas, and had there been told that he had gall stones, and had had an operation urged upon him. He was markedly jaundiced, had suffered from a marked collapse, with high pulse, cold extremities, etc., an hour or two before I saw him. There was, however, but slight local tenderness over the gall bladder, no dullness, and no evidence of peritonitis. The patient's condition was clearly one which did not permit of operation, and I advised delay. Fourteen days afterwards, I was called to see the patient again, having previously advised operation as soon as he recovered from shock. He had been up and about, and had decided to undergo an operation. On making an incision, I encountered adhesions immediately under the abdominal wall. With my first attempt to free these, there was an abundant flow of thick yellow pus. This was walled off as carefully as possible by gauze, the stomach and colon were pushed to one side, and the gall bladder was found enlarged, lying posteriorly and well to the right side, markedly distended, and adherent to the under surface of the liver. In tearing it free, there was a considerable rent made in the liver itself. Not to detail the case, which was one of unusual interest, it will suffice to say, that in spite of the extremely desperate character of the operation and the marked collapse which followed, the patient's condition began to improve after twenty-four hours, the

temperature returned to normal, and at the end of nine days the patient seemed to be out of danger. That day a fecal discharge appeared and the patient's condition rapidly grew worse from symptoms of infection, and he died about twenty-four hours later. At the autopsy it was found that the abscess which had been encountered on opening the abdominal wall had rested upon the transverse colon and had so damaged it that later perforation through this portion of the damaged gut had taken place. The point of perforation showed that the gut had been thinned by the abscess at one point until its integrity had been destroyed, and the giving way of this point nine days after operation had resulted in the fistula and death. An interesting fact discovered at the post mortem in this case was, that the dome of the liver reached up to the second intereostal space. Another case somewhat similar and of great interest in this connection, was that of a patient who returned from a distant city suffering from an attack of pain in the epigastrium similar to those from which he had suffered on several previous occasions. His physician, who is an extremely skillful diagnostician, on examination found dullness and seeming consolidation over the right side of the chest, and thought the case was complicated by pneumonia. When I saw the patient he was in collapse, his condition being so grave as to warrant no operation, and in fact he died a few hours later. The physician had told me his diagnosis of consolidation of the base of the right lung, and was surprised when I said that on examination I could not find the condition mentioned, telling him that I found no such consolidation and that I thought the patient was dying from a ruptured gall bladder. I took it that the conditions in this case were similar to those in the case which I have just described, in which the inflammatory conditions about the gall bladder had caused adhesions which resulted in forcing the dome of the liver far up into the thoracic cavity on the right side.

It is scarcely necessary to detail more cases or to discuss the topic further, since it is evident that there are many diseased conditions in the epigastrium which can be benefitted by operation and in which operation offers the only fair opportunity of recovery, so that it is the only procedure worthy of much consideration. Diseases of the pelvis are as a rule much more easily diagnosticated than those of the epigastrium and the diseased conditions of the epigastrium in which the diagnosis is uncertain are of a sort which if they cannot be helped by operation usually cannot be helped at all. This being true, since delayed operations are beset by vastly increased risk, and since early operations belong to those which are as a rule safe and successful, it seems to me that we are warranted in urging operation as a wise and conservative

procedure. A paper of this sort would scarcely seem to be complete without the mention of what has been called the ball-valve stone of the common duct. The symptoms of this are supposed to be quite characteristic. They are recurring chills, followed by fever, jaundice, clay colored stools, and bile in the urine. The recurring chills and fever are supposed to be markedly characteristic. Repeatedly I have found these symptoms to be most reliable. In one case, however, in which the symptoms were seemingly most characteristic, the patient when I saw her was too feeble for operation. At the post mortem, at which unfortunately I was not present, I was told that no stone was found in the common duct. In a considerable number of cases this is the only exception I have met, and I regret extremely that I cannot speak of the case from having been personally present at the post mortem.

During the course of typhoid fever there may come increased temperature with pain in the epigastric region and on examination a distinct tumor may easily be palpated and percussed. As is well known this may arise from acute infection of the gall bladder. Of course under such conditions there can be no question if the condition permits, as to the advisability of incising and draining the gall bladder. This is an operation which may be done under cocaine if the patient's condition is very feeble and certainly is by no means so dangerous as operation for perforation of the intestine by typhoid ulcer.

The conclusions reached from the considerations which have been placed thus briefly before you are as follows : Omitting those conditions which have purposely been excluded from this discussion and also the cases in which the diagnosis is positive and in which primary medical treatment has strongly been advised, it is my judgment that in other cases in which the diagnosis is uncertain, whether it be a question of malignancy, stone, or inflammation, it is wise to advise early exploration. If malignancy is encountered little damage has been done. Often exploration will result in the discovery of conditions which can be helped by operation, and by operation alone. The earlier the exploration is undertaken the greater is the safety to the patient, and the fewer the complications which will be encountered.

VIRCHOW.*

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HE, who is chosen by his colleagues to deliver the opening lecture of the session, is apt to view the situation with mixed feelings. At first with pride at being so selected, but as time passes, with growing uneasiness and doubt as to his ability to carry out the task assigned; and he ultimately reaches a point at which he wonders whether they wished to spoil his holidays or only hoped to make their own more pleasant. It is not an easy task to choose a subject for an opening lecture. There is an *embarras des riches* which makes selection difficult. Medicine, with its fascinating past, linked at every point with the history of the development of human knowledge, and its glorious future so full of promise for the human race, is not wanting in many and varied themes for such a lecture.

The lecturer is peculiarly fortunate when the date of his address falls with an epoch in the history of the institution; and in that fortunate position I find myself to-night.

Since the opening of the Biological Department of the University in 1890, each succeeding autumn has seen this theatre filled with ever increasing crowds of students, gathered upon the first day of the session, to hear the opening lecture. And since that date, the Biological Department has filled a peculiar place in the history of the Medical Faculty and of its students. Here, the students begin their work and within its walls the Faculty meets each month during the session.

To-day forms an epoch in the history of this institution in that this is probably the last opening lecture of the Medical Faculty to be delivered in this hall. Before the session is finished, we will have moved into the building which is now being erected to the north of this one and by transferring the work of the third and fourth years to it, the last step will have been taken to bring the whole body of medical students thoroughly in touch with University life. It is a step to which the friends of the Faculty and the University have long looked forward; for although the University has no more loyal alumni than those in medicine, yet the separation of the final years has, to a certain extent, tended to cut them off from the University and its life, and has certainly tended to produce a separation between the men of the first and second and those of the third and fourth years.

* An address delivered at the opening of the Sixteenth Session of the Medical Faculty of the University of Toronto.

At the very outset the founders of the Medical Faculty committed themselves to the position that the study of medicine required a thorough general scientific groundwork, especially in Biology, and the erection of this building in 1890 was the first step towards properly providing for this; although for the three years prior to that date good work was done even with the insufficient equipment and cramped accommodation then available. It is peculiarly fitting therefore, that the biological building should be closely associated with the development of the Faculty.

The effect of this care for the groundwork of medicine by the University authorities, is shown in the standing which its graduates have taken wherever they have gone; and the University herself has profited not only on the prosaic side of increased fees but also on the much more important one of a rapidly growing body of loyal graduates, scattered from one end of the province to the other, graduates as loyal and perhaps more influential than any other body of her alumni.

For still another reason it is fitting that the opening lecture in the Faculty of Medicine should be given in this building, because the fact that should be deeply impressed on you students who are entering for the first time the study of medicine and upon you older men who have been engaged at it for a longer period is that at bottom medicine is a biological science and that so long as during your student days, or in later life, in active practice you pursue a biological method, in the study of the problems which you may have to face, so long will you be pursuing the study of scientific medicine; but when you drift away from that method, you are drifting towards a false empiricism and quackery. Perhaps too, now that the Faculty of Medicine is to a certain extent passing from under the protecting wings of the Biological Department, it may be permitted to refer to one, who more than any other member of the university has directed the development of medical teaching in this country along true biological lines. I refer to the Vice-President, Professor Ramsay Wright, and I believe that all members of the Faculty will agree with me when I say, that we owe to him a very great debt, for the influence which his teaching has exerted upon the breadth of outlook, which our students have developed. The students of to-day will hardly realize that the point which was most severely attacked by the enemies of the University Medical Faculty in 1887 was the introduction of general biology, and the prominence given to that subject in the course, and now, when entering the sixteenth session, that we may look upon that subject and its influence upon the rest of the curriculum, as one of the glories of the Faculty, we must acknowledge that this is owing to the catholicity of spirit of the head of that department.

It is not my intention, however, to address you on the necessity of a proper biological training as a foundation for medicine; that has been done by other and abler hands than mine; and although it is ever an interesting subject to discuss, the fact is now everywhere admitted and needs no discussion.

To-day, another epoch in the history of medicine has been reached, an epoch which we must all regard with sadness, although it is an epoch which we have all known must soon come. We are to-day, students of Modern Medicine mourning the Father of Modern Medicine, Virchow. Virchow is dead and with his passing, is broken the last link between scientific medicine, which he did so much to establish and those older ideas of the first half of the nineteenth century, which he did so much to overthrow. For over fifty years Virchow's mind has dominated our science and for all time his influence will be felt; it is fitting that on such an occasion we should devote more than a passing notice to the life and works of our great master. I wish this evening, therefore, for a short time to direct your attention to the life of Virchow, and to attempt in some measure to give you an idea of what his life work has meant for medicine, and, what a loss medicine suffers by his death.

In order to properly appreciate his influence, we must first consider, for a moment, the condition in which he found the science when he graduated from the University of Berlin in 1843.

During the first forty years of the nineteenth century great advances had been made, especially in gross anatomy both normal and pathological ; in England the teaching of Hunter had done much to emancipate medicine from the errors of the eighteenth century ; in France great progress had been made under Bichat, Laënnec, Andral and Cruveilhier, while in Austria, Rokitansky, one of the greatest, perhaps *the* greatest gross pathologist of all time, had added immensely to the accurate knowledge of the gross appearance of disease as seen in the autopsy room ; but everywhere we find, that the mysticism of the eighteenth century dominated ideas and metaphysical speculations still took the place of careful observation and experiment. In fact the history of medicine during the first fifty years of the past century was still the history of the rise and fall of systems and schools. So little did scientific methods affect the interpretation of the phenomena of disease, that Rokitansky, himself the most painstaking and exact of gross pathologists, was the Father of that system which was the first to be attacked and overthrown by Virchow, namely the humoral pathology. It would indeed take too much time to attempt to fully describe the state of medical thought at this period ; it would perhaps be difficult for us to appreciate it properly ;

we have gone so far forward that to day it is almost impossible for us to go back to the point of view of the physician of 1840, and appreciate the arguments which appeared to him so cogent. The tendencies were all trancendental, there was continually introduced into the arguments the action of a something which might be called the 'nervous principle,' the 'life principle' or the 'formative principle' or something else of the kind, to which all kinds of activities were ascribed; indeed Virchow, in the first volume of his *Archiv*, quaintly scoffs at the powers of this formative principle, as described in Lobstein's Pathological Anatomy, in the following words "Does it not seem as if this Bildungskraft were a free burger from 'the bloody land of Kentucky, half horse and half alligator' or a small demon from the days of the Rosicrucians."

In Germany the system which perhaps had the strongest hold on the medical mind was that form of humoral pathology which had been promulgated by Rokitansky; a modification of the pathological views of Andral, the French pathologist. According to this view, the primary seat of all disease was in the blood and, as Rokitansky thought, disease consisted in false mixture of the elements of the blood, chiefly the fibrin and the albumen; to designate this abnormal condition he made use of the old Hippocratic term *crasis* and classified all diseases into various *crases*. One of his most important crases, for instance, was that in which he conceived there was an excess of albumen and a difficiency of fibrin; here he placed such widely different diseases as gout, rachitis, typhoid, acute tuberculosis, Bright's disease, cancer and others equally varied. How strong a hold the humoral pathology had on the minds of men is shown by many terms, still used and believed in, at the present day, by the laity, such as pure and impure blood and even the terms hot blood and cold blood and, although no one will gainsay the therapeutic value of brimstone and molasses, yet doubtless, in the minds of the common people, the humoral pathology is responsible for the vigor of its application.

The grave objection to these views and to others of the same period was that they were almost entirely speculative hypotheses with but the slenderest foundation in the way of observed fact or experiment.

These were the doctrines and theories of disease which Virchow was taught when a student in Berlin and we doubt not that throughout those years he must have struggled vigorously against them.

We have very few details about his carly years of life and study; born in Schivelbein, in 1821, a little village in the flat sandy plains of Pomerania about forty miles from the Baltic, he attended the village school and afterwards the gymnasium at Cöslin. In an anecdote by

his friend Schliemann, we see that even at the gymnasium his future originality of mind was foreshadowed in his attitude towards the study of languages, in which he was very proficient; in his home, he had begun the study of the classics, under an enlightened teacher, who did not think it necessary, that he should memorize grammatical rules, so long as he could translate correctly and write correct exercises; on going to the gymnasium he was under a Greek master who thought that since he could not repeat the rules in Buttmann's grammar, his expertness must be due to deceit and so positive was he of this, that he opposed him in his final examination as not possessing sufficient maturity of morals to proceed to the University. However, the opposition availed nothing, and he passed to the University in his eighteenth year in 1839.

During his medical education, Virchow so attracted the attention of his teachers that on graduation in 1843, instead of entering the army medical service for which he was preparing he was retained in Berlin as prosector under Froriep at the Charité Hospital; very shortly after this he was made lecturer in pathology. This was in the year 1847; and a few months later in conjunction with his colleague Reinhardt he began the publication of the *Archiv für pathologische Anatomie und Physiologie und klinische Medicin*, the journal which was to bear the banner of the revolutionary party in medicine. Reinhardt died in 1852, and since that year Virchow remained sole Editor until the day of his death, when the *Archiv* had reached its one hundred and sixty-ninth volume. At first the *Archiv* labored under serious difficulties, the second volume was not complete till 1849, the third not until 1851, from 1852 until 1856 one volume per year was produced and with the latter year began the regular appearance of two volumes, in 1861 it was again increased to three and in 1879 to four volumes per annum. The *Archiv* practically represents Virchow's life on the side of pathology; in it we see the gradual development of all those ideas which did so much to clear away the debris of past systems and schools. To the early volumes he contributed enormously, of the fourteen articles in the first volume eight are from his pen, in the next three out of ten, and so on. It was with no uncertain sound that he sketched the needs of medicine in those early articles, and it was with heavy blows that he drove home the lessons he had to teach, throughout what might be called the Sturm und Drang period of the *Archiv*.

In his leading article to the fiftieth volume, he indicates what the Editors had to face and how they were received; I will quote a portion of it.

" It is difficult at present to realize the boldness with which two young and almost unknown men undertook by the publication of this journal to give a new direction to the Science of Medicine. The market was apparently glutted with medical journals, and in Prussia especially a certain number of these bore an entirely official character. These journals appeared under the aegis of high state officials ; they received official news and were subvented in all sorts of ways. It was very far from the minds of the official world of that day to think scientific requirements necessary to ensure the circulation of the periodical press. The Editors received so little support, they had so few contributors and these so weak that they were compelled to print the feeblest and most tedious articles, indeed articles that had no other merit than that they called the attention of the reader to the writer.

" The one requirement alone that contributions to the medical press should be original (Arbeiten) gave rise at that time to great astonishment. This was the day of so-called practical observation. The busy practical physician believed he had satisfied all claims if from time to time he cast a glance backward over his professional career so rich in experiences and from it produced for the use and comfort of his colleagues and suffering humanity, a general abstract, in which he ordered and explained his so-called facts according to his favorite system. Autopsy reports were almost as great rareties as in the days of Schenk von Gravenberg (fifteenth century). Microscopic investigation there was none ; even clinical histories were only written down from memory, or if they were drawn from the daily journal, it was apparent that apart from the examination of the pulse, it was rarely a question of the systematic examination of the patient. Therapy moved in its old accustomed channels ; venesection stood in the first place ; the activity of drugs was esteemed as high as their classification into distinct groups was hard and fast ; and people were so much the more contented with their successes, since the humoral pathology, believed in and preached by laity and profession alike in most beautiful harmony, easily explained failures and offered convenient excuses.

" It would certainly be interesting to picture the condition of official medicine as it existed scarcely 25 years ago (Virchow writes in 1870) for the instruction and warning of the medicine of the future. What I have said however will show, that it seemed rather bold to declare war not only on the existing press but also on the whole official medicine, in order to bring about what both held to be useless and impossible, namely, the study of pathological physiology. In the minds of the reigning circles, Hartmann's Theoria Morbi rendered all that was necessary to the

clinician and practitioner for the interpretation of symptoms and of the healing process. More than this was evil; unfruitful learning they called it. And when I published an article in my second volume upon the reform of pathological and therapeutic views through microscopic investigation, when I desired that the whole of medicine should move at least three hundred times closer to natural processes, then I appeared to these gentlemen as an out and out unpractical, and, possibly even dangerous, doctrinaire and adventurer."

It was natural that the earliest researches of Virchow should have been directed towards the study of the cells of the body, since less than ten years earlier Schwann and Schleiden had announced the discovery, the one of the animal, the other of the vegetable cell. It was natural also that a mind so critical should at once attempt to test the pathology of the humoralists from this standpoint. We find therefore that his early contributions to science are largely upon the microscopic characters of the blood both normal and pathological. From these investigations resulted his papers on pigmentation, in which he demonstrates so clearly the two forms of blood pigment which are produced by hæmorrhage into the tissues; a chapter upon minute pathological change so complete, as practically to close the subject. At this time also appeared the results of his work on that peculiar disease of the blood, leucæmia, a name which he himself suggested. The curious gross appearance of the blood in advanced cases of this disease led to a confusion with purulent conditions, and superficial examination under the microscope seemed to confirm this. To Virchow we owe the recognition of it as a disease *sui generis*, associated with enlargement of the spleen and other symptoms, and entirely distinct from pyaemia with which it had been confused.

From these studies he was naturally lead to a study of inflammation of the vessels, the results of such inflammatory changes, the formation of thrombi or clots, and the conditions which governed the clotting of blood in the living body. Indeed the clotting of the blood in the living body had, by a series of false hypotheses, been brought by Cruveilhier, to explain the whole question of inflammation. This French pathologist had noted that the first evidence of the inflammation of the veins consisted in a clotting of the blood; and as in inflammations of the organs the presence of clots could not be demonstrated in the larger vessels, he introduced the hypothetical condition of capillary phlebitis, that is to say, an inflammation and clotting of the blood in the smallest vessels. It was to be expected that such an hypothesis unsupported by facts would attract Virchow's attention, and in his study of

thromboses he directed special attention to the question of the occurrence of clots in the vessels of the lungs ; in studying these, in order to determine whether they had arisen primarily in that situation, he was struck by the fact that when found in the lung there was almost always to be found a similar condition in some other part of the body ; and finally he was able to demonstrate that a plug resting in one of the vessels of a lung fitted exactly on to a thrombus in a systemic vein, and in fact, that this plug had broken away from the thrombus and had been carried by the blood current through the right chambers of the heart into the pulmonary vessels, passing from the larger to the smaller until ultimately it was stopped by plugging a vessel too small for its further progress. This condition of secondary plugging he called 'embolism' and the plug of coagulated blood he called an 'embolus' ; the condition of the lung tissue consequent upon this cutting off of the local blood supply by the embolus we call an infarct or a condition of infarction. Now as this formation of infarcts of the lung had been one of the strong arguments of the believers in the theory of capillary phlebitis, the whole groundwork of a false hypothesis was cut away at one blow. But Virchow was not satisfied with the simple observation of conditions as found at autopsy; he followed the question up by experiment, and by introducing foreign bodies such as rubber into the circulation of dogs so as to produce artificial emboli, he was able to more fully explain the condition and effects of embolism ; but especially these experiments entitle him to be considered one of the pioneers of that experimental pathology which was to do so much for the advance of our knowledge. Although much valuable work was done subseqently upon the subject of thrombosis and embolism by other men, and especially by Virchow's most celebrated pupil Cohnheim yet it is marvellous how complete was this first demonstration of the facts.

It is said that during the revolutionary year of 1848 when no doubt Virchow's democratic ideas were as well known and as vigorously pushed by him as his notions upon embolism, he was making an autopsy upon a patient of Schönlein's who was supposed to have died of cerebral haemorrhage ; upon opening up the brain he demonstrated to the latter an embolus plugging the middle cerebral artery, Schönlein turned away with the remark "O! you see barricades everywhere."

But Virchow's study of emboli lead him still further. Noting that sometimes the embolus gave rise to a local abscess and that this depended upon the condition of the clot from which it had originated he gained an insight into the whole question of metastasis which became immensely important when he came to study the develop-

ment of malignant tumors; at the same time he got a conception of the condition called infection which had immediate bearing on the disease pyaemia or blood poisoning.

His investigations into the subject of inflammations turned his attention to the question of the reaction of ordinary tissue cells whence there resulted a valuable contribution upon the subject of parenchymatous inflammation opening up a new standpoint which was most important in the development of his ideas on cellular pathology. In this piece of work he pointed out that the changes which one sees in the parenchymatous cells, that is the swelling and increase in numbers of the cells, were simply indications of an abnormal activity of all or certain of the processes of nutrition, which ended in degeneration of the cell. In this research, the author's attention was especially directed towards the connective tissues, and there resulted the discovery of the connective tissue cell, and of the cells of the bone and cartilage and the demonstration that the cells were all of the same nature and that the tissues were related tissues. These observations on connective tissue were of the highest importance for Virchow's own development, because they enabled him to clear his mind from the last remaining taint of humoralists and to understand properly the whole question of cell formation.

Schwann, the discoverer of the animal cell had propounded a theory for the explanation of the origin of the cell which was entirely based on humoralistic ideas. This was the theory of the blastema; he conceived that the cell originated by a kind of organic crystallization from a plastic material which he named the blastema, a fluid in fact, and that the particles in this fluid became massed together to form the nucleus and around this the cell protoplasm was deposited by a process essentially similar to crystallization. This blastema theory of Schwann was, as Virchow himself says, the obstacle over which he stumbled.

Not only Virchow, but most of the other younger investigators of that day accepted the blastema theory and were looking for facts to support it, and were endeavoring upon this hypothesis to account for the formation of all the different cells of the body. One of the strongest arguments for this view was the occurrence of certain granular cells in those areas, especially inflammatory, where new cells were being formed; besides these granular cells there were found pigment cells, blood-corpuscle holding cells and others which were taken to be proofs of the origin of these structures from a granular blastema. Virchow was able to show that these cells had acquired the granular character, or had become secondarily loaded with the pigment masses or the blood

corpuscles. Especially the correct interpretation of the granular cells, the fact that they were degenerating cells, was of the greatest importance. As he says in an article in the hundredth volume of the *Archiv* "these investigations have a very great value for the history of a human error; these granular cells were regarded as individual steps in a developmental series and they had been carefully and accurately placed in their correct order; no objection could be raised against the order, only unfortunate chance had willed that the series had been begun at the wrong end and that what were, really, cells in course of degeneration were thought to be cells in the course of development. The arrangement was right the chronology was wrong. The opponents of experimental methods, the anti-vivisectionists, should learn from this what difficulties are presented by purely anatomical investigation; and to what gross and long persisting fundamental errors they may lead."

These researches upon the development of the cells of the body and especially the study of the connective tissue cell in health and disease and its embryological history, finally lead Virchow to see that, nowhere do cells originate from a formless blastema, but that they always result from the division of previously existing cells and he finally announced the fundamental truth of the cellular pathology in his famous modification of Harvey's dictum *Omnis cellula e cellula.* It is difficult indeed to overestimate the far reaching influence of this doctrine, not only for pathology but for the whole of biology. With its recognition was swept away the whole system of the humoral pathologists and with it a crowd of other speculative hypotheses and the investigation of disease was able to proceed upon a rational scientific path. By it was settled or rather should have been settled the question of spontaneous generation.

During all these years of work Virchow's position as a University teacher was undergoing considerable change; in 1848 he was sent by the Prussian Government to investigate the outbreak of typhus in Upper Silesia and on his return he published a report, such as few governments have ever received from one of their own officials. After a masterly discussion of the history and course of the disease, with its symptoms, pathologicals findings and its treatment, he proceeds to discuss the cause of such an outbreak and the remedies to be used to prevent a recurrence.

And he does not in the slightest mince his words; he shows that the conditions which gave rise to the famine, and following it the fever were, first the stupidity of the whole group of Prussian Officials in their bureaucratic methods of dealing, with, what was an alien Polish population, then the heartlessness of both the aristocracy of birth and of money in their treatment of their tenants and their workpeople, and lastly in the

attitude of the Roman Catholic Hierarchy which had kept the peasants in the deepest ignorance. His remedy was characteristic "Democracy pure and unalloyed." His suggestion that the education of these people should be begun by giving them Polish schools and that they should not attempt to germanize them by insisting on German schools, is of interest at the present day, in view of the troubles that the Government of Germany is still having in this very district. His return from Silesia was just at the time of the revolution of 1848 and he at once threw himself into the midst of the political struggle over the election of delegates to the German national assembly for which he was a candidate. His language in his political speeches at this time must have been most uncompromising and did not tend to conciliate a government still smarting under the lash of his report upon the typhus epidemic. It is said that on one occasion in referring to the question of heredity, he said that he knew of one exalted family in which the grandfather had softening of the brain, the father hardening of the brain and the son no brains at all. And this was known to be a reference to the royal family of Prussia. It was natural then, that he should have been very much a *persona non grata* in official circles, and, as a result, his lecturership in the University was taken from him; this however caused such an uproar in University circles and drew such protests not only from his colleagues but also from all the medical societies that the government speedily reinstated him, with, however, greatly restricted powers. Conditions were however unsatisfactory so that when he was offered the newly established chair in Pathology in the University of Würzburg he accepted and in 1849 left Prussia for Würzburg. As Professor of Pathology he remained at Würzburg until 1856; throughout this period he contributed extensively not only to his own *Archiv* but also to other journals and about this time edited a text book on Special Pathology, and collaborated with Vogel in one on General Pathology in which appeared in concrete form the elements of those doctrines which were more fully embodied in his Cellular Pathology.

In the year 1856, Virchow was recalled to Berlin to fill the new Chair of Pathology, his recall being practically forced upon the Government by the medical public opinion of the Capital. He returned, but only upon conditions, one of which being, that there should be erected an institute for practical research. On his return he found the museum of Morbid Anatomy possessing only about 1500 specimens; at his eightieth birthday celebration he was able to state that the new museum recently erected by the Prussian Government at a cost of over 500,000 marks contained over 23,000 specimens; a very pregnant example of his activity along only one line of pathological work.

In the year 1858 appeared his great work upon Cellular Pathology. This was a course of lectures delivered in the early part of the year chiefly to his colleagues and medical men in the city of Berlin the full title of the work being *Cellular Pathology as based upon Physiological and Pathological Histology.* I have outlined to you already the investigations which led up to the conceptions embodied in this book. Its success was immediate and it was at once translated into all the European languages.

The position reached in these lectures is broadly this, that the cell is the unit of the body, in health and disease, that disease of an organ is disease of the cells of that organ, disease of the body, disease of the cells of the body. And that those manifestations which we call pathological are simply abnormal manifestations of otherwise normal processes. In fact that pathology is simply a branch of the science of biology.

The test of the value of this conception of Virchow's is, that, year by year as new facts were discovered they fell naturally into place and I can recall no better example of this than the way in which the neuron concept and all our later knowledge of the pathology of the central nervous system has naturally fallen into line with the cellular pathology.

From 1863 to 1867 appeared his work upon maligant tumors under the title "*Die krankhafte Geschwülste.*" This was an embodiment of all those studies on tumors and their development, which had appeared at different times in the *Archiv.* His studies upon the origin of the tissue cell had directed him to the proper explanation of the question of histogenesis; his work upon emboli had cleared up the whole subject of the spread of these tumors in the body that is the subject of metastases; and his investigations into the subject of the connective tissue cell, enabled him to separate clearly the carcinomata or epithelial tumors from sarcomata or connective tissue tumors. This great work was unfortunately never completed and although it contained errors it still remains one of the most exact pieces of investigation which we have upon the subject.

Succeeding years produced longer works upon chlorosis, syphilis, trichinosis and other subjects, but as time passed his activities on the side of pathology became more critical than productive, owing largely to the fact, that his interests had become so extended that he was unable to devote as much time to the exacting work of experimental pathological investigation. His duties as a teacher however were ever his first thought and his museum was watched over and developed with zeal to the very last; in fact during the last few years of his life, he was accustomed to spend an hour every Sunday in explaining to the public who

were admitted to certain rooms, the meaning and significance of the specimens. Indeed in his interest in the scientific education of the public especially of the working classes he was singularly like Huxley, and, like Huxley, he devoted not a small portion of his time to this object.

In spite of his separation from the active work of pathological investigation in later years, one sees how closely in touch he remained with it all, when one reads his public addresses, such as the Croonian lecture of 1893 and the Huxley lecture of 1898.

Virchow's mind seems to have been of such a character that he was compelled to follow out with the same faithfulness the side lines that opened up before him as he did his special work of pathology. And thus we find that his experiences in the Silesian Typhus epidemic not only threw him into the whirlpool of politics but probably also was responsible for that interest in public sanitation which in after years proved of such immense importance to the City of Berlin. In the same way his study of cretinism gradually turned his attention to Anthropology to which science he was so devoted in after life.

I have alluded to his political activities, and certainly these deserve more than a passing notice. In 1862 he was elected as a radical member to the Prussian Diet and he remained in that chamber until his death, as leader of the radical party and Bismarck's most redoubtable opponent; it is said, that when in 1865, he defeated the Government upon a motion to create a navy, Bismarck was so incensed as to challenge him to a duel, an honor, however, which he declined His political work took not a small portion of his time and for many years he was chairman of the finance committee of the house. That he did not find his political activities interfering in his regular scientific work shows what immense powers of concentration he had. However, when remonstrated with once, upon wasting his time in politics he said; "The dates of many of my lectures will prove that even on these days on which important matters claimed the attention of parliament I have attended to my duties as a teacher. To set at rest the anxiety of my friends I will add that the silent and often unnoticed labor of the scientist requires more energy and greater effort than the activity of the politician, which is both noisier and more speedily appreciated. The latter avocation has appeared often to be rather a recreation." In 1880 he was elected to the Reichstag and remained a member of that body for some years, until in fact he was defeated by a socialist candidate; a commentary upon the fickleness of the electors of Berlin. As a municipal politician he occupied the position of a member of the Berlin Municipal Council for forty years and during that period he initiated and carried out the whole

system of public sanitation which has made Berlin one of the healthiest cities of the world. The system of sewage disposal by filtration upon the beds of the sewage farm to the north of the city was the scheme to which he devoted his greatest energies and which he carried through in the teeth of strong opposition; and from the time of its inception until his final illness he made his own special care the health of the work people upon the filter beds. It was with considerable pride, therefore, that he could point to them as as healthy as any other class in the whole population of Berlin. The housing of the working classes, the system of city hospitals, and many other sanitary improvements which have made Berlin so celebrated are due also to his personal interest.

There is yet another side to Virchow's life to which reference must be made. That is to the work which he did in the science of Anthropology. He was apparently led into this by his interest in the pathology of the skull and especially by his studies on cretinism. But once his attention was attracted to it, he made the subject his own and his investigations in that science alone, would have sufficed to make him famous. As Professor Franz Boas points out, in a recent number of *Science*, the beginnings of his work coincide with the beginnings of modern physical Anthropology in Germany, and no man has done more to shape, guide and foster this science than Virchow. He took a leading part in the formation of the German Anthropological Society, the Berlin Society, and in the establishment of the *Archiv für Anthropologie.* In connection with the German Society, he initiated the collection of statistics as to the distribution of the color of the skin, eyes and hair in Germany. The results of this enquiry, with an extended discussion of the distribution of the different types, was embodied in a report by himself. In the allied subject of Archaeology, he also took great interest and in the year 1879 he accompanied his friend Schliemann to Asia Minor partly to assist him in his excavations at Hissarlik on the site of ancient Troy, but partly also for the sake of the holiday which he needed badly. His interest in the Trojan remains was very great, but it was characteristic of him that he should show even greater interest in the living inhabitants "upon the plains of windy Troy". He found them without medical attendance and with but the crudest notions in regard to the treatment of the prevalent diseases and he began to prescribe, first for Schliemann's workpeople upon the excavations and then for the villagers around, until at last his practice became so large that twice a day, he had to examine long lines of waiting sick, so that he had little time for Archaeology or rest. In order to enable them to obtain the necessary medicines he taught them the uses of the various medicinal plants that grew in abundance about

them. The only reward was the deep gratitude, even veneration of the people. Schliemann relates that a spring of water which broke out from an excavation which Virchow was superintending was afterwards regarded as of almost miraculous value; it was carefully surrounded by stones and named the Physician's well.

In connection with Virchow's anthropological work, it is important to touch for a moment upon his supposed attitude towards Darwinism, an attitude which was persistently misrepresented by the opponents of the doctrine of evolution. In 1877, at a meeting of the German Naturalists and Physicians he took occasion to refer to the doctrine of evolution, chiefly from the standpoint of Anthropology. The address was at once taken to be an out and out attack upon the whole doctrine and was considered of so much importance that the Times published it almost in full. As a matter of fact, the address was directed against the too hasty acceptance of unproved hypotheses; and by any one who knew the history of his early struggles with the older ideas in pathology Virchow's attitude is easily understood : he was in fact ever afterwards extremely conservative towards all hypotheses, and his warning on this occasion was this, against teaching that the doctrine of descent should be taken as a proved fact whilst it was still an hypothesis ; what he most feared was, that the doctrine of evolution would lead to the spread of socialism among the masses with the same consequences which the doctrine of the equality of man had in the days of the French Revolution. His language was in places most sarcastic and the address drew from Haeckel, who was specially attacked, a bitter reply. His strong conservativeness in Anthropology is shown also in his attitude towards the interpretation of the significance of the Neanderthal skull ; this famous relic of primitive man presents certain characters which were taken by most anthropologists to indicate a lower mental development than that seen in the later prehistoric crania. Virchow's position was one of reserve ; the peculiarities were so strikingly like certain pathological conditions that he thought that judgment should be withheld until other examples were obtained for comparison.

Perhaps more than any other character was the breadth of view which Virchow maintained until the very last. Professor Osler of Johns Hopkins University, in his address in Medicine at the meeting of the Canadian Medical Association, a few weeks ago, took as his text Chauvinism in Medicine ; perhaps there has never lived a better example of absence of Chauvinism than Virchow. He was truly a cosmopolitan and when one reads for instance, his tribute to Glisson in the Croonian lecture of 1893 or remembers his reference to Lister in the Huxley

lecture of 1898, when in the midst of the lecture he turned to grasp the hand of Lister as he sat on the platform beside him, one sees that for English medicine at least he had a very great appreciation ; but the same was true also in regard to French and Italian medicine : he first taught the Italians to appreciate Morgagni as he taught the English to appreciate Glisson. And he ever taught that medicine knows no national boundaries.

In 1891, his seventieth birthday was celebrated ; it was a triumph which few men have experienced ; but it sank into insignificance before the much greater celebration of his eightieth birthday last October. On this occasion delegates appeared at Berlin from the whole civilized world to congratulate the master. On account of his age, he was not allowed to know anything of the extent of the fete, before hand but was carefully watched and guarded from all fatigue by his friend Waldeyer. The celebration lasted a week and in spite of his age everyone was struck by his activity and the keenness of his mind.

In a very characteristic article in the December number of the *Archiv* of last year, he returns thanks for the honors and congratulations that were showered upon him on that occasion. He says in one place, " For the quite extraordinary honors that have been conferred on me, I can do nothing more than repeat my warmest and heartiest thanks. The sense of obligation is too great to permit me to express in words my feelings. And I am now too old to begin new work which could be considered a fit return. I shall not tire in working as long as my powers hold out. But I can promise no more, than that I will endeavor to bring to a conclusion, useful for the world at large a series of more extensive investigations which I began in my youth." Are we not reminded of Tennyson's Ulysses,—

" How dull it is to pause, to make an end,
To rust unburnished, not to shine in use !
As tho' to breathe were Life. Life piled on life
Were all too little, and of one to me
Little remains : but every hour is saved
From that eternal silence, something more,
A bringer of new things ; and vile it were
For some three suns to store and hoard myself,
And this gray spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought."

Perhaps the most touching incident in the whole celebration is given in the following words from his own article : " One night as I returned late from one of the fetes, I found to my surprise my little street, the Schelling Strasse, illuminated from end to end. I had not had the slightest idea that my neighbors felt so kindly towards me. But the

street was filled with children also, many of them quite small; and I had to make my way to my house door through a regular lane of children, and the cries of jubilation of the little ones only ceased when I had disappeared into my house. And now as often as I show myself in the street, the little ones run towards me stretching out their hands and saying, 'Good morning, Herr Virchow.'"

If, in closing, we attempt to sum up what Virchow's influence in medicine has been, we see that it has been far more than the clearing up of our views upon individual pathological conditions, such as thrombosis and embolism, or the histogenesis of tumors, or even the pathology of the cell. It is something very much greater and broader. It was, first of all, the overthrow of the authority of dogma and the establishment of the authority of observed fact. It was the transplantation of medicine from the barren fields of metaphysical speculation to the fruitful soil of experimental investigation. It was indeed the establishment of a new point of view in medicine, the point of view of medicine as a biological science.

And, if in an earlier paragraph I stated that I did not propose this evening to address you upon the need of a biological training in medicine, perhaps I was in error, for what more concrete example could be given than a study of the life of Virchow?

TREATMENT OF HYPOPYON KERATO-IRITIS.

DR. BURNHAM read a paper, "A new departure in the treatment of hypopyon kerato-iritis," at the Montreal meeting of the Canadian Medical Association. His remarks were confined to the most severe type of the disease. The treatment advocated was purely constitutional save Atripine used locally once daily. The combined treatment, which is the form used, consists in the internal use of mercury and the iodide of potassium and pilocarpine given hypodemially. The usual treatment which is almost altogether local, he considers inferior. As to any further information regarding this treatment and its results he referred to his papers in *The Archives of Ophthalmology, The Ophthalmic Review, The Lancet* (London). He also considers that these results ought to engage the attention of the physician as other organs and tissues of the body ought to be as susceptible to its influences.

THE SURGEON ON HORSEBACK.*

By S. M. HAY, M.D.,

Surgeon to Toronto Western Hospital; Consulting Surgeon, Toronto Orthopædic Hospital.

MEMBERS and Friends of the Toronto Medical Society:—

On rising to address you on this occasion, let me thank you for the honor you have conferred upon me in electing me to be your President. Perhaps I may be pardoned for looking at this honor in the ordinary way, and for feeling a certain personal satisfaction at being chosen to preside over this important and intelligent organization of our city medical men. I feel this the more when I remember our ranks contain many older and more experienced men, who have won for themselves not only a continental but an international reputation. As I recall this, my momentary access of vanity gives place to humility, recognizing that I must accept the responsibility and toil along with the honor. Without further delay I shall announce my subject—"The Surgeon on Horseback."

The fascination, as well as the benefits of horseback riding, is as old as history. It was indulged in by both sexes and by those in every social position. The charm that a beautiful horse has, and always has had, for mankind, is well known. In reference to this method of exercise, someone has said: "There is nothing better for the inside of a man than the outside of a horse." The late Dr. Talmage said: "A man who does not like a horse ought to be kicked by a jackass."

While all this is true in a general way, it is specially true of the surgeon of all ages. Just run over in your mind the surgeons of your acquaintance, and note how many of them are graceful devotees of this delightful ancient and modern custom. What is more beautiful to behold than a well-bred steed, with his glossy, dappled coat, his proudly arched neck, and pointed ears, and eyes of fire and affection combined, with nostrils distended and head tossing in his anxiety to be off? Such an animal, mounted by a well-trained, accomplished rider, who sits so gracefully and securely that both move together like a magnificent piece of living machinery. Such an animal, with such a rider, is surely a "thing of beauty and a joy forever." The surgeon invariably rides a good horse. He always selects one peculiarly adapted to his own ideas. It is well that this is so, because in that case he can perhaps bring more out of that partiular mount than any other rider possibly could. The surgeon can always mount his own horse with more ease than anyone else can, and he usually mounts with grace, ease and confidence, but frequently dismounts with difficulty and discredit. Great interest is taken in selecting a name for his favorite. It may be a Ruskin, a Maud S., a Jenny Lind, or an Ivanhoe, but the horse which surgeons most frequently

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ride, is named by the laity, as well as by the profession generally, "Hobby." Now, we wish to consider to night some of these hobby-horses, and some of their riders.

What is a hobby? A hobby is that which a person pursues with zeal or delight. Buckley, of New York, was once visiting an insane asylum, and, observing an inmate seated on an upturned chair with strings for reins, said to him, "Oh, riding a horse?" "No: this is a hobby." Well," asked the doctor, "what is the difference between a hobby and a horse?" "You can get off a horse," was the reply. How true that is. We can get off a horse, but how difficult to dismount a hobby.

What is a surgeon? Greig Smith says "The surgical type of a man is both born and made". Someone has said he should have "the head of an Apollo, the eye of an eagle, the heart of a lion, and the hand of a woman". Like a great general on the battle field, he must know what is going on at every point of the struggle, and at the same time be master of the details immediately in hand. He should have the head to plan and to meet the surprises of an operation, the eye to see quickly the exact constriction of every ligature, and the adjustment of every suture; the thinking brain and witty fingers cooperating and a determined will to quickly and skilfully adjust the last suture with the same care and precision as the first. There is surely a difference between a surgeon and an operator. The former is the great pathfinder, the latter walks in the road made for him, and frequently copies and imitates well the work of the surgeon.

Regarding those who are galloping hard after the butterflies of surgical fashion, who have never placed a pillar in the temple of art or science, who have only attained a mushroom popularity which is won without a merit and lost without a crime, I have nothing to say. But we will take a retrospective glance at the lives of some of the leaders and masters of our art, who, during their striving, struggling days after truth, were considered hobbiests by their associates; but who eventually received the highest compliments from our ablest men for "Imitation is the sincerest flattery". Labor has a sure reward, achievement being its pay. Great men make their opportunities, they do not wait for them, and progress is not by accident. It is the result of persistent toil. All true progress is in direction from the complex to the simple, from the crooked to the straight, from wrong to right, from error to truth.

We read in holy writ, "Your old men shall dream dreams, your young men shall see visions". Achievement is born of vision. Vision is born of the Spirit, and the Spirit is the gift of God, or in other words the natural endowment of the individual. Who ever achieved, or ac-

complished anything great, who had not first an ideal, a plan, a mental picture, or a vision of his cherished aim? And, again, the vision is as fruitless as the desert if not followed by the spirit of persistent determination. This is equally true in every walk of life. Columbus, from the saddle of his hobby horse, had a vision of something beyond, or he never would have discovered America. Watt, as he gazed through the cloud of steam that made the lid of mother's tea-kettle dance and rattle, saw far into the future of that wonderful power. Stevenson, when he built his first locomotive, saw something of the future; and, as a result of his hobby, we have to-day that magnificent monster rushing through our land on its glittering lines of steel! Our great Lord Lister had a vision. I quote from July's Practitioner—"Lister created anew the art of healing; he made a reality of the hope which had for all time sustained the surgeon's endeavor; he removed the impenetrable cloud which had stood for centuries between great principles and successful practice, and he rendered possible a treatment which had hitherto been but the vision of the dreamer". The spray was unduly exalted to such an extent that its use was considered by many to be Listerism, while it was in reality only one and the least important feature of his treatment.

A great German surgeon, in an association meeting, said to the consternation of Lister and his friends, "Away with the spray," and it has come to pass. Even our loved Lister went too far, and was termed a faddest or hobbiest; but it is necessary to go too far in order to find just how far you can go. You must search and investigate on both sides of the safety line in order to locate that line. If you wade into the sea to fix the safety limit, going till the water reaches your chin, and then putting down your stake, how do you know but that the water is no deeper for a rod farther out? It is just so in all branches of science and art. The investigator must search beyond necessity and prudence, and be termed a hobbiest for doing so, in order that he may establish the boundary of right and truth. What a debt of gratitude we owe Lister, when we remember that it is by his successful efforts antiseptics have come through a sea of confusion and complexity, and are now becoming beautiul in their simplicity! A surgeon friend of mine has said, "The nearer we stick to the religion and soap of our grandmothers the nearer we will approach moral and physical cleanliness of body and mind."

There are three great methods of sterilzation —thermal, mechanical, and chemical. Thermal is at once the most efficient method, any dressing or instrument that is given a temperature of 212° in water for a reasonable time is perfectly safe, and fortunately this can be obtained alike in the castle or cabin. For the hands and the site of operation, the mechanical is the most important method. Chemical sterilization is becoming

very narrow in its field of usefulness. Trusting to the chemical to the neglect of thermal and mechanical is almost criminal.

James Marion Sims was another great leader who rode his hobbies well. He graduated in arts, 1832, and, a few years later, in medicine from Jefferson Medical College, Philadelphia. In early professional life, he practised in Alabama where his health failed. After wandering around for some years, he observed that his health was better in New York than elsewhere, and so decided to locate permanently there, about 1853. Here he met T. Addis Emmet and many other prominent doctors. In 1857, Dr. Sims delivered an address on "Silver sutures in Surgery," and told of his first cure of vesico-vaginal fistula done in 1849, by silver wire after thirty failures in this same individual by the silk suture. I quote from Emmet "Soon after his arrival in New York he formed the acquaintance of Drs. Baker, Mott, Francis, Stevens, and others, and it was thought advisable that Dr. Sims should deliver an address to the profession, setting forth the necessity of a woman's hospital, where vesico-vaginal fistula and a few of the injuries of childbirth might be treated. Little thought was given at the time to the need for any special place, or treatment, for the diseases of women. I well recollect a statement made by Dr. David M. Reese, now many years dead, but at that time a prominent general practitioner and a fair surgeon, that it was easy to apply the nitrate of silver through a sylindrical speculum to any case of ulceration; an infusion of red oak bark could be given for leucorrhœa, and if a prolapse existed any one could put in a Meig's ring or Physick's spherical pessary. He laughed at the idea of the necessity for a woman's hospital, and thought it impossible to find a sufficient number of women sick enough to fill it. What a contrast between such a statement and our knowledge of to-day? This gentleman felt satisfied that he had mastered the whole subject in treating these three conditions, which, as symptoms of different pathological changes would not to-day convey alone, to any one a knowledge of the true lesion." This is only another example of how our great men are misunderstood even while they are seeing open visions; and their rapt absorption of them bringing them but derision and an unpleasant notoriety.

And such was the origin of the Great Women's Hospital at New York. On one occasion, Dr. Sims proposed to open the abdomen for the removal of a long pedunculated fibroid. Dr. Francis and Dr. Mott were at first disposed to yield to Dr. Sims until Dr. Stevens entered a protest. He had no opinion to express, he said in regard to Dr. Sims views; they might be all right, but he felt, if Dr. Sims should succeed by chance, that every young surgeon in the land would be ripping open the bellies of the young women to ascertain if they had such growths to be removed, and

and he would oppose such an operation simply on the ground of humanity. Dr. Sims was not able to carry out his wishes in regard to several cases of ovarian tumor, and it was not until about 1860, fifty years after Ephraim McDowell had let the light of day into the abdominal cavity, that he felt his position sufficiently established to perform on his own responsibility, his first ovariotomy.

So we see the surgeons and the consulting surgeons of no less an institution than the Woman's Hospital of New York have, unitedly by their actions, termed one of our great pioneer heroes a hobbiest and deliberately placed their shoulders in front of the wheels of surgical progress. How careful we should be. We must not fix a limit to the resources of any man. The process is slow that grafts most of what is best into every science and art. We put to the severest tests of science and experience every product or result of the highest genius. Our real reliable advancement is due to this severe testing. Invention and innovation is reserved for the few, while most of us should seek wisdom to use well what we have at hand, varied according to the requirements that exist. Most people require the roads made for them before they travel. All this need not hamper originality of thought and method. Investigation and research must have a free course, and it does have a more successful and beneficial course when the methods and knowledge bequeathed by others are first mastered. The old is good. By it we are enabled to evolve something better. Conservatism may be bad in business, but it is worse in surgery. It spends too much time living over yesterdays.

J. Marion Sims may justly be termed the father of Modern Gynaecology. He placed the cure of loathsome fistula among the precious gifts with which the surgery of his century has blessed woman kind. And very closely associated with him was, perhaps, the most original and greatest plastic surgeon the world has ever seen—Thos. Addis Emmet. He, too, came through, in his earlier life, many stormy seas of opposition and petty persecutions on account of his advanced ideas. I will not undertake to trace his career here, as many members of this society, as well as the writer, have very frequently seen him operate and listened with delight to his words of wisdom.

Ephraim McDowell was born Nov. 11th, 1771. At thirteen years of age, his parents moved to Danville, Kentucky After obtaining his literary education at Georgetown, Ky., he went as a student of medicine to Dr. Humphries, in Stanton, Va. In 1793-4, McDowell attended lectures at the University of Edinburgh. This great university could not satiate his thirst for knowledge, so he went outside and employed Dr. Jno. Bell, a great character, who was so enthusiastic in anatomy and surgery that he filled his pupil to overflowing with professional zeal.

Greig Smith tells us "Jno. Bell constantly dwelt in his lectures on the possibility and the advisability of removing such tumors, and his teachings bore fruit for Ephraim McDowell was the first ovariotomist." In 1795, our hero began the practice of medicine in Dansville, Ky., where he was literally a surgeon on horseback, often riding fifty and one hundred miles in the saddle. He braved storm and flood and darkness, and knew what it was to be lost in the dense forest. He was a noble character, and knew no fear, save the fear of doing wrong. I now quote from an address by my late personal friend, Prof. Jos. Eastman, to whom I am largely indebted for the history of Ephraim McDowell :—

"On Dec. 13th, 1809, he was called to see Mrs. Crawford, whose attending physician had thought her pregnant, though he knew she had gone beyond the usual time. Our hero, being a thorough master of all that was known of that highest department of our art, namely diagnosis, declared that she had an ovarian tumor, and at once suggested its removal, but he stated to her so far as he knew the operation had never been done, that it would be an experiment, therefore he could make no promise as to the outcome. He thus unlocked the bosom of confidence with the key of personal magnetism. By his manly presence and honest words, he planted a new hope in the heart of despair. This woman made the journey, sixty miles, on horseback on a bleak December day, in compliance with the wisdom of this great and good man, that she might be near him so that, in a critical moment, he could, with his own hand, ward off the approaching danger. When it became known what he was about to undertake, a mob gathered about his house. He learned that if the patient recovered it would be well with him ; but, if she died from the operation, he was to be at the mercy of a merciless mob. He offered a prayer and proceeded with his task. This prayer, in fervancy and literary merit, has rarely been equaled. Permit me to remark, greater heroism was never displayed by man or woman. Martyrs, burned at the stake, could not escape the death if they would. This personification and crystallization of heroism would not allow him to abandon his principles and escape the danger if he could. More than that, genuine heroism must be deliberate, must be premeditated, must be actuated by a pure, a high, a holy, and a beneficent motive. It was not a maddening, pseudo-heroism, stirred up by the rattle of drum and shriek of fife on battle fields, where man seeks to slay his fellow man, that actuated him.

I insist that the heroism of Napoleon, or Grant, can never be compared to that of this cool, calculating, thinking man. I repeat, the heroism that seeks to destroy human lives is not comparable with that which seeks to save a human life, and establish principles which shall

not only save one life, but which shall continue to save human lives throughout all coming ages. The operation was completed and during nearly a century has not been improved upon. His technique was almost identical with what we have to-day. The substitution of gauze for the drainage tube still more nearly approaches the ligatures which he allowed to hang out the lower angle of the wound, the best of capillary drainage. Mrs. Crawford lived thirty years. Our hero performed the operation thirteen times with eight recoveries, and at sixty years of age returned from visiting a patient, laid down his instruments for the last time, and secured that rest which he never could enjoy while a call to the bedside of a suffering patient was pending. Surely such a life of unselfish devotion to the cause of humanity would make him a fit companion for the gods.

"To such a life there is no death,
What seems so is transition."

I have read of the heroism of Napoleon and Wellington at Waterloo, of Nelson at Trafalgar, of White at Ladysmith, and, still more recently, of Roberts and Kitchner, and with the memory of these heroes fresh in my mind, I still wish to say in honor of the memory of Ephraim McDowell that a braver man never mounted steed or marshalled hosts upon a battlefield. A faddest in the eyes of the people who were about to mob him, a hobbiest in the eyes of the profession, not one of whom would share with him in the responsibility of his operation, a hero to-day.

It was after the great work begun by McDowell was made practicable by the antiseptic contributions of Lister and others, that abdominal surgery began its rapid march towards its present proud, yea well nigh defying position. But this knowledge and possibility was soon abused, for the tyro surgeon sprang up everywhere, and a crusade was made against the innocent ovaries which were falsely charged with almost every symptom and pain of womankind, and consequently sacrificed in abundance. The result was many sad, melancholy, hysterical woman, with nervous systems shattered beyond hope of recovery. Of this Eastman has said :—" Oh the pitiful mental and physical wrecks wafted to the gynaecological shores from the great ocean of life, wrecks which have gone down beneath the surging waves of unsubdued passion and unrequitted love. Shall love be more or less requited when the wife has no passion to subdue ? What wrecks are being wafted from the ocean of surgical aggression to the tender mercies of the family physician let him answer for our instruction." I wonder if we are not even now going to the other extreme in our conservative surgery on uterine appendages.

If time would permit, I would like to line up a string of hobby-horses before the grand stand of this society to-night, and ring the bell

and start them around the course and watch with you the effect of the spavin on this one, the ringbone on that one, and the curb on the other, and I would watch the disposition, temper, and tricks of them all, especially in relation to the safety or danger of the rider, and I would wish with you to freely and frankly, for our mutual benefit, extoll their virtues and expose their vices.

Here is a tony little Cob. Let us examine him. His name is McBurney's point. He was bred in the stables of the metropolis of this continent. He is badly bitted, said to be unsafe, very hard to catch, you think you know just where he is and you open the gate and enter to find that he is away over at the other side of the field. He has a bad reputation, too. He has been known on more than one occasion to throw his rider without the slightest warning, headlong into a belly full of pus.

See this stylish little Filly, named "Vaginal section." She looks like a winner. Oh what a pity, she is blind, and do you know her rider is blind too. But it makes very little difference, they both do their work in the dark. They are accustomed to move in darkness and through tunnels over hanging with weeping willow-boughs growing from luxuriant pubic planes. This animal has accomplished some good work in her benighted course,but the same, and much more has many times been done by the upper road, in broad day light, and with greater certainty.

A well kept fine looker is "Alexander's operation." Sound in wind and limb and guaranteed kind in harness. He has only one fault, that is, he is no good. Who has not seen one of New York's best jockeys mount this steed and hunt around for an hour in search of the reins, and, when he did find them, was only as sure of it as he was of anything else he wasn't sure of. However, he starts off and, for every leap the animal made forward, it made two half-leaps backward. He seems to be running on a treadmill. When, finally, the rider tries to tighten his elastic reins and take his bearings, he discovers he is just where he started from, nothing accomplished.

This is the kindest little horse of all, "Batty's operation." His great qualification is that he is easy to ride. He is the choice of the young, the feeble, or the infirm rider. A jockey who would not venture to mount and guide Hysterectomy, or Myomectomy, will ride with confidence and control with skill this little Batty Oophorectomy. But oh! the unscientific procedure—removing histology, leaving pathology, and trusting to fates for a cure. And we might review other horses, viz., "Ventral fixation," "Vaginal fixation," "Electricity," "Educated touch," etc., but I hasten on.

How apt we are to think that all the great things in our profession have been accomplished, and that there is nothing left for us to do. Far

from it. When Columbus discovered America the work was not done. There were forests to remove, acres to till, rivers to bridge, cities to build, and rail-roads to construct. And there are surgical continents to-day, awaiting their Columbus and awaiting developement. What about that Northern continent the brain, with its complex hidden centres and their association with function, or disease? What about the contents of that Rocky mountain ridge from brain to sacrum, the spinal cord? The surgery of the entire genito-urinary system requires cultivation and elabortion. Surgery is an art and art means the best of its kind.

We must be thorough in our work. Abdominal Surgery seems to have made more advancement of late than other branches, and that in the face of great difficulty in accurately diagnosing abdominal disorders. Perhaps the language in which the abdominal viscera express their trouble, is less definite and clear than that of the other great cavities of the body, the thorax and cranial cavity. Tate said; "Absolute accuracy of diagnosis is far from being possible, only the ignorant assert that it is and only the fools wait for it." Notwithstanding this the abdominal surgeon is expected to expect the unexpected, and we know that the unexpected frequently dashes upon us in an unguarded moment.

I wish I could say something that would set this whole society on fire and stimulate every member to persistant effort, for I am personally convinced that it is not extraordinary ability that succeeds so much as ordinary ability with extraordinary perseverance. No one requires to be a genius to achieve grand results. Some one has well said that genius is nothing more, nor less than a capacity for labor. Edison says of his success. "It is 98% hard work and 2% genius. Many failures are the result of two great a capacity for absorbing rest. Too much rest is rust. We hear a lot about the profession being full. I have strained my eyes to see what is the condition on the upper rungs of the professional ladder, and have come to the conclusion that it must be very lonesome up there. Yes, there is room where stood the McDowells, the Jenners, and the Listers. This should stimulate us. What men have done men can do again. "Lives of great men all remind us, we may make our lives sublime."

Our profession should welcome to her ranks any one who is bold enough to mount a hobby, or specialty, in any branch, and ride as fearlessly as did Jenner, McDowell, or Lister. It becomes us to have our criticsm of these advanced men tempered with charity, for we know that frequently the hobbiest of to-day is the hero of to-morrow. I would say to all original thinkers and earnest searchers after truth.

"Ride on—nor fear to breast the sea,
Our hearts, our hopes are all with thee."

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

THE INFLUENCE OF INTELLECTUAL WORK ON THE TEMPERATURE OF THE BODY.

THE *Gazette des Hopitaux* Aug. 23rd, has a general review of the literature of this subject by Vaschide and Piéron. There has always been a wide spread belief that intellectual work augments bodily temperature, and this has received support from the results of various investigations. Three methods of estimation have been used (1) Estimation of cerebral temperature (2) estimation of general temperature (3) calorimetry.

For the first form of estimation an appliance has been used which translates thermal variations into galvanometric indications. The instrument is of the utmost delicacy, but this fact, to some extent, defeats its own end, as there is an inherent difficulty in avoiding external influences. Lombard, using this method, found an increase of cerebral temperature accompanying intellectual activity which was constant but did not exceed one-twentieth of a degree centigrade. The form of mental activity adopted was reading aloud—an exercise, as our writer remarks, associated with much muscular activity and therefore subject to error.

The cases in which by cranial lesions a thermometer could be placed in contact with the deeper parts of the brain are so rare and the conditions so abnormal, that the results cannot be considered scientific evidence. On the whole they seem to be interpreted to support a foregone conclusion.

Experiments on general temperature, either buccal, axillary, rectal, or manual, have been pursued with greater exactitude, but in many cases with a disregard for circumstances that are able to vitiate results. Thus, no account has been taken of them of the time of day and the variations of temperature that may be normal in any given case, Reading has been prescribed as the form of mental activity to be used, a form associated with considerable muscular activity, while adventitious muscular movements, often involuntary, have been disregarded. Pidancet has an extended series of observations which show how true this is, as in some cases, work, and in others repose, is followed by an increase in temperature.

Pidancet has also made use of calorimetry and carefully avoided sources of error. He requires mental calculation, instead of reading,

warns against involuntry movements of the limbs, or thinking when supposed to be in mental repose. On the whole he concludes:

(1) Intellectual work does not modify the emission of heat to the surface of the body.

(2) Intellectual work does not modify the central temperature.

(3) Intellectual work does not affect the production of heat in any manner appreciable at present.

EXTIRPATION OF THE EXTERNAL CAROTIDS.

THE September number of the Brooklyn *Medical Journal* contains in the report of the Brooklyn Surgical Society the description by Dr. A. T. Bristow of operations for the removal of the external carotid arteries for inoperable cancer. The first case was in a laborer, aet. 35; adeno carcinoma on the right side of the face, occluding the nasal passage and pushing down the hard palate, and filling the antrum Nothing could be hoped from removal of the superior maxilla, so it was decided to extirpate the external carotids in the hope of starving the growth.

November 16th operation as described by Dr. Dawbarn done on patient, and found to be relatively easy, being completed in sixty-five minutes. The patient had a long, thin neck, and the bifurcation was low down. The superior thyroid was given off the common carotid just at the bulb. It was, however, tied. When the external carotid had been dissected above the giving off of the posterior auricular, a cannula was introduced into the stump and two and one-half dr. of gelatine injected for the purpose of shutting off the internal maxillary branches. After operation the temperature reached one hundred but once, and the patient made a rapid convalescence. On December 18th, the external carotid of the other side was extirpated; and, owing to a higher bifurcation, the operation was more difficult, but, owing to the experience gained, was completed in fifty minutes. This side received no injection, as it was resolved to take no risks with the anastomosis between the infraorbital of the internal maxillary and the ophthalmic branches, lest the arteria centralis retinæ might receive a charge of vaseline and instant blindness result. The pallor of the face was noticeable after both operations. After the second, the swelling of the face diminished very rapidly; and, at the time that the patient left the hospital, it was but one-third of its former dimension and the discharge from the sinus had ceased.

In the discussion some important points were brought out. Tying off alone is no use, the anastomosis is too free. Both sides must be

extirpated. There should be a fortnight's interval for recuperation, and the operation should be performed on the well side first, as otherwise the patient, finding some improvement, may refuse to submit to a second operation. The healthy tissues seem to be able to survive on much less blood than the new growth. Care must be taken to avoid tying off veins, as the production of a venous stasis would affect the result. To more completely prevent re-establishment by anastomosis the injection of vaseline is done, but it is an admittedly dangerous procedure, and still only in the experimental stage. If the ophthalmic artery is plugged, blindness will result; if further back, you cut off the vessels at the base of the brain. One and a half drams of a mixture of melted vaseline and paraffine, with melting point of 108° F., injected at 120°, has been used, but one dram is safer. The operation offers in inoperable carcinomia the chance of a few more months of life, and a possibility of recovery in sarcoma.

TOXICITY OF METHYL ALCOHOL.

IN the Johns Hopkins *Bulletin* for August, Hunt analyzes a number of experiments made upon animals to determine the relative and actual toxicity of wood spirits, and concludes that the physiological action of methyl alcohol and its fate in the body show conclusively, that however pure the preparation may be, it is totally unfit for use as a substitute for grain alcohol in any preparation which is to be taken internally, and especially in preparations to be taken for any length of time.

ETIOLOGY AND PROPHYLAXIS OF EPILEPSY.

PEDIATRICS, September, has an article by Hanson, of Cleveland, on this subject. The pathological condition is primarily a functional disease of the grey cells of the cortex of the brain, with later organic changes in the neuroglia; when these are established it is incurable The disturbances of these cells are due to two classes of causes the immediately exciting and the predisposing or permanent.

The exciting cause is generally some form of irritation *e.g.*, teething, intestinal or vesical disturbance, the exanthemata, nasal obstruction, fright, etc.

The principal permanent causes are: heredity, rickets, lymphatic constitution, puberty, and trauma of the brain. Recent investigations show that among hereditary influences, alcoholism is one of the most potent, syphilis, impaired mentality, etc. Rickets is so important that Ohlmacher says the problem of dealing with idiopathic epilepsy is that of combating

infantile rickets. Bra claims to have found in 70 cases a parasite in the blood, before an epileptic seizure that was not present afterwards but the subject demands further investigation.

The lymphatic constitution is understood to be a general lymphatic hyperplasia, thickening of the aorta and sometimes hypertrophy of the heart, retarded development of the internal organs, persistent hyperplastic thymus and enlarged thyroid with neurotic tendencies.

The grand mal type of the disease is the most common in this diathesis. Children of this constitution take chloroform badly, and are especially liable to sudden death.

Before puberty the proportion of male children is greatest while from 12 to 20 females preponderate. The more frequent injuries to males at birth, and the greater strain on females at puberty probably account for this fact.

ON THE USE OF BLOOD-LETTING IN GYNAECOLOGICAL CASES.

IN the *Medical Times and Hospital Gazette* for August 23rd, this subject is discussed by Dr. Bedford Fenwick of the Soho Square Hospital for Women. He believes that in many cases,the rational and most effective treatment is local depletion,and this may be accomplished—1. By scarification of the cervix where that part presents a deep red-bluish or purple appearance, evidencing much or long-continued congestion of the uterus, always remembering, of course, to make sure that the condition is not due to pregnancy. 2. By cupping or leeches over the ovaries where throbbing burning pain in those regions is the chief or only symptom. 3. By leeches around the anus in cases where the *fons et origo mali* evidently is the presence of inflamed hæmorrhoids, prolapsus recti, inflamed carunculæ myrtiformes, and such like congestive conditions. Leeches are not suitable for treatment of the cervix,owing to the difficulty of controlling them, but scarification is not difficult. The writer uses a Ferguson speculum and a long-handled knife, making enough punctures each 1/8 to 1/6 inch deep to secure the amount of bleeding wished. There are several practical points to be well remembered in the procedure. When there has been a long-standing congestion, the mucous membrane and its subjacent tissue are almost always hardened and thickened in consequence, and the punctures therefore have to be made more deeply and more freely than usual, to make blood flow. Next, the knife-edge should be very sharp; if not, the pressure necessarily used may send the knife much deeper than wished, and the wounding of deep vessels produces profuse bleeding. Again, it is always well to warn the patient not

to move, and what is going to be done, otherwise a sudden frightened jerk on her part may drive the blade even up to the hilt. The punctures should be confined strictly to the cervix, and in every case that part should be well in view and well cleaned before the knife is applied.

The writer describes a number of cases of dysmenorrhoea, dyspareunia, subinvolution, ovaritis, etc., treated successfully in this way and concludes:—

1. That where the cervix uteri is rendered by disease congested, deep-red, bluish, or purple in colour, local depletion by scarification generally gives immediate relief.

2. That where this congestion is caused and kept up by flexion of the uterus obstructing the return of the venus blood back from the cervix, and causing chronic enlargement of the uterine veins generally, local depletion allows a pessary to be inserted with safety and comfort to replace the organ, which almost certainly could not otherwise be tolerated.

3. That in every case, of course, the possibility of the patient being pregnant would be investigated before scarification were attempted.

4. In cases of subacute ovaritis or obscure throbbing pain in the pelvis, cupping or leeching externally frequently relieves the patient immediately.

5. In cases of vaginismus from inflated hæmorrhoids, or other rectal congestive conditions, leeches round the anus give rapid relief or cure.

6. That scarification is the simplest and safest method of abstracting blood from the cervix with the precautions which have been enumerated; leeches or cupping being kept for external use only.

CHONDRODYSTROPHY FOETALIS.

IN the *Archives of Pediatrics* for August, Morse reports a case in which this condition was present. The child, a male, born of Italian parents, healthy, was first seen when two months old. The abnormalities consisted in the small size, the weight being six pounds, two ounces, and the limbs were very short, the legs being only 6½ cm. in length. There was a slight general enlargement of the lymph nodes. He died at four months. No autopsy.

The condition is due to a disturbance of the normal process of ossification of the primary cartilage taking place early in foetal life, between the third and sixth months. As only endochondral ossification is affected, and periosteal development goes on as usual, the character of the deformity is accounted for; this, too, marks the distinction between

this condition and foetal rickets, a name sometimes wrongly applied. A similarity in the cranial appearance has suggested a relation to cretinism, but there is no evidence to support this.

Many causes have been suggested, but the history of reported cases gives no clue to the etiology. Most cases die either before or shortly after birth, but some have lived, and are seen as typical dwarfs with large bodies and very short limbs. The mental development is often normal, the reproductive functions fully developed, and children have been born from them of normal development.

THE PASSIVE CARRYING FUNCTION OF THE ARM.

HUFFMAN, in the *New York Medical Journal*, Aug. 30th, discusses the importance of this function, allowing, as it does, weights to be carried beside the thigh without further muscular exertion than that of keeping the fingers closed. It is often destroyed in children by fractures about the humeral condyles, rachitis, &c., making the arm either straight or reversing the angle, which is normally 17° outwards. Correction of the deformity is effected by an osteotomy above the condyles, from within outward, and keeping the limb in a splint till new bone is formed.

THE NEW YORK MILK COMMISSION.

THIS commission of the New York County Medical Society has been in existence for two years, and has gradually broadened the scope of its work until from attempting to improve the quality of some of the better supplies of milk, it is now controlling a considerable amount of bottled milk sold in New York, and is moreover supported entirely by the dairymen who benefit by its labors.

There are two grades of milk—'inspected' and 'certified'—the former to be produced in a cleanly and sanitary way without imposing on the producer any expensive care which was not considered absolutely necessary. There are requirements as to barnyard, stables, water-supply, grooming and milking cows, and cleanliness of milkers and utensils. Four per cent. butter-fat is required and the milk must not average over 100,000 bacteria per c. c. m., in summer or 60,000 in winter. This milk sells at 5 cents a quart wholesale or 8 cents bottled retail.

The 'certified' grade must not average over 30,000 colonies per c. c. m.; the tuberclin test is required, the rules as to conditions utensils etc., are more stringent. This milk sells from 10 to 12 cents a quart. The dealers are well pleased with the increase in price and business from the certification.

SUTURE OF DOUBLE WOUND OF THE HEART.

IN the *Gazette des Hopitaux* Aug. 21st, Launay describes an operation for repair of a double wound of the heart. The patient was accidently shot by a revolver in the left breast about 3½ hours before. There were the diagnostic signs of pneumothorax and excitation of the heart. The 4th, 5th, and 6th costal cartilages were raised, the pericardium opened and found full of blood. There was slow trickling of blood from a wound on the anterior face of the left ventricle. This was closed with catgut and the heart being turned forward to the right, the wound of exit was found and closed with some difficulty. The clots were removed and wounds closed with drainage. The patient made a rapid and uneventful recovery. Radiography showed the bullet in the muscles of the back.

LACTATION ATROPHY OF THE UTERUS.

IN *American Gynaecology* August, Vineberg, discusses the physiologic hyperinvolution of the uterus that accompanies lactation. This must be distinguished from the permanent atrophy that accompany too prolonged lactation. The condition is found at various times after confinement. The writer believes that it is established by the 8th to the 12th week and may persist for weeks. It is perhaps more constant in those cases in which there is lactation amenorrhoea. In the majority of cases it remains for some time after the cessation of lactation, though in some cases the uterus regains its normal size during lactation as seen in cases becoming pregnant at this time.

The condition has been found in a few cases which were not nursing, but is constant and much more marked in those who are, and the writer suggests that it may be due to the constant reflex irritation from the mammary glands. Sub-involution is the cause of many forms of pelvic trouble, and the writer finds in this an argument in favor of the mother nursing her child, and a suggestion that the infrequency of cancer uteri in dispensary patients is due to the fact that this class of women invariably nurse their children.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

EAR DISEASES AND LIFE INSURANCE.

THE importance of ear disease in connection with life insurance examination is insisted on by Hammond, who maintains (*Jour. A. M. A*) that we should not consider the patient's statements or recollections, because it may happen that suppuration has occurred in early infancy and has been forgotten, or the patient may have become so accustomed to it as not to consider it a diseased condition or inconvenience. The examiner should always be on the alert. He points out that consumption may sometimes be detected by the clinical appearances in the ear, and he insists on the importance of not considering merely the chronic cases. Among the things we may put on our dangerous list are suspicious nodules or tumors of the auricle in elderly persons and ulcerated areas, which may be due to breaking down of an epithelioma.

Another point which seldom receives attention is the liability of persons suffering from partial deafness to accident. Vertigo may depend on various conditions, but it may favor accidents, and should be a cause for careful examination. Many cases of otorrhœa are easily cured, and this fact should be considered. The prognosis is improved in late years. We should consider the rights of the applicants as well as those of the company we are safeguarding.

OPTIC NEURITIS WITH PARALYSIS OF BOTH EXTERNAL RECTI FOLLOWING MIDDLE EAR DISEASE.

MAYO COLLIER in the *Medical Press and Circular* cites an interesting case of this nature. A girl eighteen years of age was seen with symptoms of acute suppuration of the right tympanum following the removal of a small polypus from the ear. There was a history of otorrhœa since childhood following measles. Patient complained of being ill, occasional vomiting and pain in the same ear and side of the face for three weeks. Temperature was 97.4° and pulse 60. The pupils reacted normally, with a slight internal strabismus of the left eye. The optic discs were swollen. Nine days later there was paralysis of both external recti, iridoplegia with early neuro-retinitis in both eyes. The patient was drowsy, disinclined to take food, and was evidently losing ground.

The mastoid antrum was opened, and was found full of granulations, stinking steatomatous concretions, and offensive pus. No opening was found leading to the cerebral cavity. During the next few days patient was somewhat improved, but the ocular paralysis and vomiting continued. Eventually, however, patient entirely recovered.

The lesson to be learned from this case is a valuable one. Nausea, vomiting, pain in the head and subnormal temperature may certainly be symptoms pointing to cerebral complications. Optic neuritis with implication of cranial nerves would undoubtedly be so. These in conjunction with a stinking discharge from the ear would naturally point to cerebral infection. Yet apparently this was not so, or if so, to such limited extent as not to warrant interference with the cerebral contents.

THE IMPORTANCE OF AN EXAMINATION OF THE LARNYX IN CASES OF ANEURISM OF THE AORTA.

JOHN SENZIAK in the *Journal of Laryngology, Rhinology and Otology* from seven cases of his own and seventy-four collected from literature maintains as follows :—(1) That the paralysis, partial or complete, of the enurrent laryngeal nerve is a very frequent, and, what is more important, in many cases one of the earliest signs of aneurism of the aorta ; (2) that the Roentgen rays in these cases, where there are no distinct symptoms of aneurism of the aorta (the so-called latent forms), generally confirm the diagnosis of this disease made on the basis of laryngosopic examination. A cure showing the importance of both the laryngeal examination and Roentgen ray picture is cited. A patient suffering from slight hoarseness of three weeks duration showed to the surprise of the examiner complete paralysis of the left crico—arytenoid muscle (paralysis postici). There was nothing to be found to account for the laryngeal paralysis nor was there to be detected any signs that pointed to an aneurism. By means of the Röntgen rays the dark shadow representing the contour of the heart and aorta showed the latter to be considerably dilated into a saccular form, with weak but distinct pulsation. The writer concludes by stating that both of these methods of examination should be combined, and resorted to in the diagnosis and prognosis of aneurism of the aorta especially in its latent forms.

IN the July No. of the CANADA LANCET a review of *Cheatle's* paper on the examination of the nose, throat and ears of 1,000 school children was given. A committee was appointed by the Otological Society of the United Kingdom to report on the advisability of a compulsory examination of the hearing powers of school children. Their report was made

at the meeting of the society in Dublin. It was as follows. *Journal of Laryngology*, Aug., 1902.

(1) That there exists among the children of the poorer classes a very large amount of ear disease which is preventable and curable.

(2) That it is not sufficiently recognized that ear disease in childhood tends to considerable loss of hearing, health, and life; that it militates against a child's education, and that later on its subjects are seriously hampered in their life's work, and often incapacitated for the services of the State.

(3) That ear disease in children is often not treated, partly owing to neglect, and partly to ignorance and to the belief in popular fallacies, and more especially to an inability on the part of parents and teachers to detect it.

(4) That any scheme, having for its object the security of children against the consequences of ear disease to be efficient, must provide for through and systematic examination and treatment.

5. And lastly, having regard to the national importance of the subject, we recommend that a memorial embodying this report be submitted to the president of the committee of the council on education.

PERMANGANATE OF POTASSIUM IN PURULENT OPHTHALIMA.

HANSELL in the *Therapeutic Gazette* for May has an interesting paper on the use of potassium permanganate in the treatment of purulent ophthalmia. The author believes it the best and most beneficial antiseptic in use for these cases. Solutions having a strength of 1-2000 were used and gradually increased up to 1-600. In severe and recent cases a strength of 1-600 is used to begin the treatment. The eye is irrigated with a rubber nozzle attached to a douche bag for five minutes at a time and the solution guided into all portions of the subjunctival sac and allowed to discharge over the side of the face on a rubber sheet and thence into a receptable. The solutions are used every twenty minutes in severe cases for the first twenty-four hours and gradually lessened both in time and amount according to the progress of the case. The staining of the face is of little account and is easily removed with oxalic acid. Moreover the solution stains any abrasion of the cornea just as fluorescine does.

TEMPORO-SPHENOIDAL ABSCESS

DR. PERCY JAKINS of the Central London Throat and Ear Hospital (Medical Press and Circular) operated on a girl, aet $3\frac{1}{2}$, who had been admitted into the hospital for an offensive discharge from

the right ear of three years' duration; the child had on and off complained of headache, and at times seemed stupid. However, for the first few days after admittance the headache dissappeared, and she seemed brighter, but on the sixth day she became drowsy, with constant yawning and shrieking, the pupils being widely dilated; an erythematous rash appeared over the chest, right knee, and ankle. The child was immediately put under chloroform, and a semi-lunar incision was made over the right mastoid, the skin was reflected with the periosteum; the antrum was exposed, together with the mastoid cells, which only contained a little recent lymph. The lateral sinus was next exposed, it was found patent and perfectly healthy. The skull was trephined over the temporo-sphenoidal region, the dura mater was slightly bulging, this was divided, and a long, thin knife carefully passed into the brain; pus immediately escaped. The wound was enlarged with a brain pus seeker, when a fair amount of pus welled up; adrainage tube was then inserted, and the patient removed to bed. Dr. Jakins said this was evidently a case of a temporo-sphenoidal abscess, and remarked that this was another sad instance which showed the danger that parents run in not having ear disease attended to at once, without waiting until serious cerebral symptoms manifest themselves; any patient he thought, who had an offensive discharge from one or both ears, which does not improve on treatment, and is accompanied by headache, nausea, and vertigo, ought to be operated on without delay. With regard to the operation itself, he drew attention to the fact that, considering that the discharge had lasted for three years, there was so little disease found in the antrum and in the mastoid cells; the disease, he considered, must have attacked the roof of the petrous bone and so infected the temporo-sphenoidal lobe.

LATERAL SINUS THROMBOSIS.

DENCH, (jour, A.M.A.) has operated on 22 cases of sinus thrombosis with 2 deaths, one from septic pneumonia and the other from nephritis apparently induced by the anesthetic. In 4 of the cases only was it found necessary to ligate the internal jugular vein, and all of these cases recovered. He believes that prompt surgical interference of the most radical kind is the only safe course, and he details his method and reports cases. He thinks it wise in all doubtful cases to resect the internal jugular vein to eliminate the possibility of infection, though he does not prescribe this in all cases. Where the patient has been under observation for a few days and we have a fairly complete temperature record of 24 to 48 hours showing no marked evidence of systemic infection, the surgeon may rely upon simply clearing out the clot in the sinus

if it is to be found This same method should be followed in cases which first come under observation at the time of operation. The sinus can be fairly well cleared out by the curette. On the other hand, in those cases which are first seen at the time of operation and in which the sinus can not be thoroughly cleared, and in which also the surgeon is confident that a certain amount of infected material is left in the venous canal, he thinks immediate excision of the jugular vein is demanded. The operation is not a serious one, takes little time, does not endanger the patient by prolonged anesthesia and prevents further systemic infection. The temperature is the only real guide.

SANITARY MEASURES FOR REDUCING THE AMOUNT OF BLINDNESS.

E. W. TREACHER COLLINS, F.R.C.S. (Practitioner), concludes a paper on infantile ophthalmia with the following suggested measures calculated to reduce the amount of blindness in the world: 1. Compulsory notification of cases of ophthalmia neonatorum by all persons, other than medical men, attending women in labor. 2. Instruction as to the importance of the universal adoption of prophylactic measures (preferably Crede's method, or the use of a sublimate solution, 1 in 2,000, or protargol 20 per cent.) by all lecturers and writers of text-books on mid-wifery. 3. The appointment of ophthalmic surgeons to maternity institutions, more especially those which provide for attendance of women at their own homes. 4. The provision in all midwifery bags, of a drop bottle labeled "drops for the eyes." 5. The better training of monthly nurses in the methods of aseptic cleanliness.

SOME CONSIDERATIONS ON THE HYGIENIC AND PROPHYLACTIC TREATMENT OF MYOPIA.

DUANE, in the *New York Medical Journal* for June, writes a very instructive article on the management of Myopic patients. Myopes are divided into three classes:—

(1) Myopia developed in late youth or adult life, and never rising much above 2°.

This class of myopia can usually be traced either to use of the eyes in excess or under unfavorable conditions, or to the wearing of improper glasses. It is usually associated with astigmatism, which may even be the cause of the myopia. Patients with this degree of myopia should restrict the excessive use of their eyes to reasonable limits, to use their

eyes for near work only with proper illumination, and to occasionally rest their eyes while at their books by looking into vacancy with head erect.

The full correcting glasses, *as found under a cycloplegic*, and, with these, hygienic precautions complete the entire treatment, as this form does not tend to increase.

(2) This form is one in which the myopia develops in childhood and progresses steadily, or, more often, discontinuously, up to the age of twenty-one or twenty-two, when it comes practically to a stand-still. Its maximum amount varies from 2° to 10°, rarely exceeding this, and it is not accompanied by the choroidal stretching and atrophy that we group under the name of sclero-choroiditis posterior. This is frequently called the "School Myopia" of the Germans. Duane believes children with this form should have their full correction given at once, and for constant use. Additional care of the general health and hygienic precautions are necessary. Particular attention should be paid to the *illumination*. The patient should not depend on a single light over his head, but the intensity of the shadows should be modified by having another light, so as to illuminate the books from the side. The size and legibility of the print, the height of school desks, quality and tint of the paper, and the character of the handwriting (vertical script being preferred), are all essential points to consider. These patients should be seen at intervals, and any changes in the glasses necessary made at once.

(3) This class comprises those of pernicious progressive myopia, and is accompanied by stretching and degenerating changes in the fundus of the eyes. The myopia begins in early life and rapidly increases. Treatment: (1) full correction to be worn constantly; (2) restrict *very greatly* the use of the eyes for near work, and have the patient lead an out-door life and take up some out-door occupation; (3) improve by every means the general health; (4) re-examine the patient at intervals of six months and change the correcting glasses if required. Duane holds that in myopia of 18° or less (and in selected cases of even higher degree), should be ultimately given their full correction for distance and near work, and to require it to be employed steadily—it being understood that this is done not merely because it gives the patient good sight, but because it affords the best prophylaxis against the further development of the myopia.

Now-a-days, when most myopes are sold glasses by the *graduate* optician, the public should be warned that the treatment of their defective vision demands something more than gold-rimmed eye-glasses sold by the "*eyes-examined-free*" man.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

Assistant to the Professor of Neuro-pathology, McGill Medical College.

THE medical colleges have commenced their regular session. Laval and Bishop's College opened their classes on the first of October, but McGill men were hard at work somewhat sooner. Over 400 men were registered at the time of writing in the latter faculty, more than 100 of these being freshmen. On September 23rd, instead of the opening lecture with which the session usually begins, Dean Roddick gave the students an informal talk upon the work of the coming year. He stated that his first duty, after welcoming the men, was to introduce the new registrar, Dr. Von Eberts. He felt sure that the position, so long and so successfully occupied by Dr. Ruttan, had again fallen into good hands. His second duty was to hand over to their care the new buildings, which were now completely furnished and ready for occupation in every department. He contrasted them with the former building on Cote Street, which he attended when a student, and spoke of the unsanitary condition of affairs at the time, warning the students against unecessary contact with virulent infection when feeling run down. In speaking thus, he referred to the untimely death of Wyatt Johnson, stricken down in the performance of his duty. He then went on to point out the changes in the calendar which enable third year men to devote more time to the clinical study of disease at the hospitals. In speaking to the fourth year men be recommended a study of the common and every-day diseases, and cautioned them against looking out continually for the unusual, to the exclusion of the average and ordinary. To this end he advised more study in the out-door departments, where this class of cases is treated. Another thing to be avoided was the tendency to specialize before graduation. A man required all the grounding possible, in as wide a field as can be covered, before specializing.

He closed by explaining the present condition of the Dominion Registration Bill, namely it has to pass each Provincial Legislature before it becomes law, and he hoped that this would occur in time for the students present to take advantage of it.

There is promise of serious trouble among the medical men of the province in consequence of the action taken at the semi-annual meeting of the Provincial Medical Board, with respect to the literary examination necessary for admission to the study of medicine. All students wishing to enter medicine with a view to securing a license to practise in this

province, are obliged first to pass the literary examination prescribed by the board, which appoints a sub-committee of examiners to deal with the subject. A majority of these gentlemen have received their preliminary training in the Catholic colleges of Quebec, and they conduct the examination along the lines to which they are accustomed. In order to approximate to this the Protestant students have been compelled to take an extra course in philosophy, before presenting themselves for examination. The faults of this style of examination have been apparent to all, but it has been accepted as the best that could be done under the circumstances. Harmony has therefore existed in the past, but it has been somewhat disturbed by the action of the Provincial Board in passing a resolution to the effect that only those who have taken the "Cours Classique Complet," which is the regular course of study in the French Colleges, may present themselves for the preliminary examination. This regulation practically prevents every Protestant student who has not a B.A. degree from presenting himself for examination next July. The physicians, representing the minority, will meet shortly to see what can be done and an effort will probably be made to have the resolution rescinded at the next semi-annual meeting ; but, failing this, there is some talk of the Legislature being asked to divide medical education into two sections, as general education is now divided. Of course, this new regulation must pass the Legislature before it becomes law.

In regard to those possessing B.A. degrees, the requirment is that they must register their degrees before beginning the study of medicine. This requirement has not been strictly enforced, the registration of the degree being accepted whenever convenient. McGill University, a few years ago, arranged that B.A. and M.D. degrees might be obtained after six year's study. Three new doctors graduated on this system last year, and their degrees were accepted and licenses granted, it is said however that the majority of the board did not understand the situation and that they do not intend to be so lenient in the future. They propose to fall back on the rules, and to enforce the regulation requiring the B.A. degree to be registered before the study of medicine is commenced. As the medical course is four years, the board can, if it so desires, prevent McGill from continuing the plan of six years study, as far as Quebec Board men are concerned. Dr. Lachapelle states that they who consider that the resolution is aimed againest any branch of the community are in error, for when the "Cours Classique Complet" was mentioned it was intended that an equivalent course in English would also be accepted. If this is the case it is to be hoped that some changes will be made in the resolution before it is passed by the Legislature.

E.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

VICTORIA ORDER OF NURSES.

A Few years ago, the Countess of Aberdeen visited Halifax and organized a branch of the above named order. Nurses were engaged, and the work was carried on for some time. The Countess, however, had hardly left the shores of Canada, when, for some reason or other, the work was abandoned and the nurses dismissed. Not until we were without them apparently was the value of their services recognized. The physicians doing work among the poorer classes found them most helpful. Visiting the patients once or twice a day, making or assisting in the making up of the bed,—changing the bed linen etc., in a way that only one, who has had training in such matters can do, add to the comfort of the sick one, and in many cases must add materially to his welfare. The nurse can instruct the friends about keeping the bed in a proper condition and the proper care of the patient.

A number of the benevolent ladies of Halifax, realizing the need of better nursing among the poor, have determined to start the order afresh. They have organized and are now making a thorough house to house canvass of the city to get the where-with-all to carry it on.

We are informed that their efforts are meeting with success, that the poor themselves are contributing to it, and expressing keen interest in its welfare. The prospects are that the order will in a very short time be in full swing in Halifax. It has the full sympathy of the medical profession here.

THE NOVA SCOTIA SANATORIUM FOR CONSUMPTION.

THE Provincial Government is asking for tenders for the erection of a building to be used for the above named purpose. The building is to be located near Kentville, in Kings county, and, from what we can learn, the situation is a most suitable one for the treatment of pulmonary tuberculosis. The district about Kentville offers as near an approach to an ideal climate for phthisical patients as can be obtained anywhere in Nova Scotia. It is hilly, and the building, being placed on one of these lesser elevations, will be well protected from strong winds. There is an abundance of fresh air and sunshine, with freedom from dust, and comparative freedom from fog. The atmosphere is dry, and, consequently,

a much lower temperature can be endured than would be possible near the coast, where the air is always moist. These are all essential points in the selection of a site.

The building is to be of two stories, with a pitched roof. It will occupy a frontage of 115 feet, and is to be built of wood. Each story will be surrounded by a balcony onto which the windows will open, so that the patients will have easy access to the open air. A semicircular tower, from the ground to the roof, will occupy each end of the building. This will permit the placing of more windows in the front than would be the case if the corners were square. Numerous windows will be placed all over the building, thus giving free entrance to light and sun. On the ground floor, opening into a large corridor, will be the offices, laboratory, supply room, physicians' apartments, and several bed rooms. The second floor will be taken up with bed rooms, parlor, nurses' quarters, bath rooms, and a small kitchen for night use. Opening off this floor will be a specially constructed sun house. The kitchen for general use will be in an extension at the back. A conservatory, with sides and roof of glass, will occupy a portion of this extension.

The building is to be fitted up with all modern improvements, and will, when completed, afford accommodation for some fifty patients. Should it be necessary, it can be enlarged at any time.

The grounds are to be made attractive by walks, trees, etc.

There is to be a resident medical officer in charge, and the treatment is to be that carried out in other sanatoria of the same kind, namely, plenty of good food, together with an abundance of fresh air and sunshine. The patients are to be kept in the open air as much as possible.

HALIFAX MEDICAL COLLEGE.

THE session of 1902-03 opened on September 2nd. The number of students enrolled is larger than that of any preceding year. The building has recently been remodeled, class rooms added, and a wing containing a well equipped laboratory has been built on to the main building. These changes will be a great improvement as hitherto the work was considerably hampered by inefficient accommodation. The calander for the present session includes a photograph of the building as it now is, together with one of the interior of the new laboratory. Along with these, and several others, are ones of the operating room and wards of the Victoria General Hospital, where the students get their clinical instruction. There have been no changes on the teaching staff of the college since the last session.

Unfortunately Dr. Halliday, the Professor of Pathology, was. at the very commencement of the session, compelled, owing to ill health, to give up his work. Dr. Halliday will winter in Colorado. It is hoped he will be fully restored to health, and able to resume his work next session. Dr. Campbell will attend to the Pathological department during his absence.

HALIFAX BRANCH, BRITISH MEDICAL ASSOCIATION.

THIS branch was organized in 1887, chiefly through the instrumentality of Surgeon-General McDowell, A.M.S., who was then stationed at Halifax. Since then it has steadily grown until now its membership numbers sixty-six, together with some twenty unattached. Many of these belong to different parts of the province, and, consequently, are unable to attend regularly. Meetings are held every two weeks during the winter months, when papers of general interest to the profession are read and discussed. There are always several clinical meetings, held at the Victoria General and Nova Scotia Hospitals, when cases of unusual interest are exhibited, one or two evenings are usually devoted to the study of pathological specimens in the laboratory of the college.

The first meeting of the present session was held in the Halifax Hotel, on the evening of October 15th. The President of the Branch, Dr. Thos. Walsh, occupied the chair.

The meeting proceeded to elect officers for the ensuing year. The ballots cast resulted in the election of the following gentlemen. President, Dr. Geo. Campbell; Vice-President, Dr. F. W, Goodwin; Secretary, Dr. C. D. Murray ; (re-elected). Treasurer, Dr. A. J. Mader ; The following were then elected members of the Branch Council :—Drs. Ross, Trenamau, Kirkpatrick, Hattie, Murphy, Jones and Peeke.

Surgeon-General O'Dwyer, A.M.S., was appointed representative on the Council and Parliamentary Bills committee. Dr. O'Dwyer was, until quite recently, the Principal medical officer on this station. He now resides at Ramsgate, England. While in Halifax, Dr. O'Dwyer took an active part in the meetings of the branch. One evening is to be devoted to military surgery, when Dr. Jones, late of the South Africa Field Hospital Corps, will read a paper on the work done by that branch of the Canadian Contingent, during the latter part of the late war. It is expected several members of the Army Medical Service will also take part.

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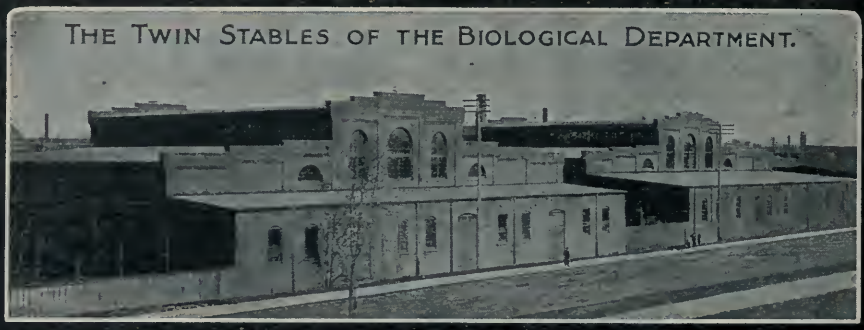

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EDITORIAL.

QUEBEC AND THE DOMINION REGISTRATION BILL.

OUR excuse for saying a word or two upon this subject is the recent action of the Board of Governors of the College of Physicians and Surgeons of the Province of Quebec. At the semi-annual meeting of the Board, held a few weeks ago, it was decided that the medical course in all the Colleges should be one of five years, each year to consist of a nine months' session. It was also decided that the standard matriculation be raised by compelling all presenting themselves for the study of medicine to have taken the "Complete or Classical Course of Study," or, in other words, to be a graduate in arts prior to entering upon the study of medicine. These regulations require the approval of the Legislature of the Province before coming into operation.

With regard to the Roddick Bill, providing for Dominion Registration, the Medical Board for Quebec adopted the following resolution:

"That while recognizing as desirable reciprocity in diplomas and licenses in medicine between the different provinces of Canada under certain conditions to be set forth in the course of study, as well as the free access for the purposes of practice between these same provinces by all regular holders of these diplomas or licenses, the governors of the College of Physicians and Surgeons of the province of Quebec believe it their duty to oppose any intervention or organization made to the end above enumerated, which has for its effect the curtailment of the privileges or acquired rights of this board, of compromising its autonomy, or of relieving it of a part of its control of medical studies guaranteeing actual conditions, and for all these reasons the governors believe it to be their duty to refuse their approval of the Roddick Bill as passed by the Federal Parliament; but they are prepared to suggest and to accept a system of reciprocity of diplomas and licenses in medicine between the provinces of this Confederation, provided that this reciprocity shall be put into effect under the direct control of the provincial boards, or of a medical council deriving its initiative from these boards and sanctioned by the Provincial Legislatures."

We regret this action of the Board of Governors of the College of Physicians and Surgeons for Quebec. As it is the intention of the Medical Board to adopt a five years' course of Medical study, the students of Quebec would hold as high a standard of qualification, as those of any other Province in the Dominion. They would not stand to lose by having the wider field of the Dominion opened to them. When the terms of the Roddick Bill are properly examined they take no privileges away from any Province; but, on the contrary, give some that are not now enjoyed. We are glad to learn that Dr. Roddick intends to stick to his guns, and make an effort to have the following adopted by the various Provincial Legislatures:—

"'When there shall have been established under the authority of the Parliament of Canada a medical register for Canada under the control of a Medical Council for Canada.

"'Then, notwithstanding anything contained in any of the acts hereby amended any person duly registered in the said register as a medical and surgical practitioner or as a student of medicine and surgery, shall without any further evidence of qualification, be entitled to be registered in the medical register of this province as a duly qualified medical and surgical practitioner or as a duly qualified student of medicine and surgery, as the case may be, upon production of a certificate under the hand of the registrar of the said Medical Council of Canada, certifying that such person is so duly registered, upon satisfactory proof of the identity of such person, and upon payment of such fee as may be prescribed by the Medical Council of this Province in that behalf.'

If the above, or a similar amendment, is adopted by all the Provincial Legislatures, the Dominion Registration Bill will become law, and pass into active operation, as it provides for a medical register for Canada under the control of a medical Council for Canada. Dr. Roddick intimates that if any of the Provincial Legislatures refuse to sanction the Dominion Registration Bill, he will again approach the Dominion Parliament and ask that the bill be amended so as to make the formation of a Dominion Medical Board contingent upon the acceptance of the bill by five or more of the Provincial Legislatures. One would think that the Quebec Legislature would be the first to approve of the Roddick Bill, as by it the other Provinces, where 300,000 to 400,000 French Canadians reside, would be opened up to the French Canadian practitioners We desire to encourage Dr. Roddick, and to express the hope that the Legislature of Quebec will be one of the first to approve of the Dominion Registration Bill.

In the resolution of the Quebec Medical Board it is agreed to accept a system of reciprocity of diplomas and licenses between the Provinces,

provided this shall be put into effect under the control of the Provincial Board, or a Medical Council deriving its initiative from these boards. Here is the principle of the Roddick Bill granted. When the Quebec Medical Board is willing to go so far in the direction of medical reciprocity, it would seem but a small step further to accept in its entirety the Roddick Bill for the establishment of a Dominion Register.

The Medical Board of Quebec seem to be opposed to any curtailment of its privileges or acquired rights, or of anything that would compromise its autonomy or relieve it of a part of its control over medical studies. But we might say that the profession of Quebec would be represented on the Dominion Medical Board. We would also say that the other Provinces are just as anxious to maintain a high Standard of Medical Education as is Quebec. On this score the profession in Quebec would have no cause for complaint. The other provinces would relinquish as much as Quebec; but Quebec would be an equal gainer with them by the change.

If, however, the Province of Quebec decides to continue its opposition to the Dominion Registration Bill ; and the Dominion Parliament declines to so amend the Bill, as to make it operative as soon as five or more of the provinces approve of its terms, then it might be so amended that such provinces, as do approve of the Bill, could form a common registration board, leaving it open to the province or provinces at first objecting, to come in later. In this way a common standard could be established for nearly all of the provinces ; and, no doubt, in course of time for all. Let us have a national profession. *Speremus optima.*

THE PREVENTION OF SYPHILIS AND VENEREAL DISEASES.

IN the early part of September of this year, there was held in Brussels, Belgium, the Second International Conference for the above object.

The topics submitted for consideration were public prophylaxis as the regulation of prostitution, the protection of minors, places for treatment, and the punishment of those who transmit the disease ; and personal prophylaxis such as the means by which the people may be made aware of the dangers of these diseases, and how to avoid them.

A number of resolutions were considered to the following effect that the State should take advantage ofevery meansof contending against the spread of venereal diseases ; that the most efficient means is to familiarize the public with the dangers and importance of these diseases ; that arrangements should be made for the free treatment of these affections, without unnecessary publicity ; that there should be compulsory notifications, and those who neglected treatment should be looked after

by the police ; that there should be a law to prevent any one but a qualified practitioner attending these cases ; that prostitutes should be brought under the control of the law, being made to observe sanitary regulations for the safety of the community ; and that great attention should be paid to the instruction of the young.

Both those who favored " abolition " and " regulation " of these diseases alike admitted that the present laws were quite inadequate. The state or government should take cognizance of both contamination and prophylaxis. There ought to be a law to reach all contagion, and to protect those who were not infected, and for the redress of those who were infected by others. The system of control, such as it actually is, having been shown to be completely inefficacious, is condemned, and it is time to resort to the common law.

Some years ago, Sir W.R. Gowers, in his lettsomian lecture, pointed out that in London there was probably one in every ten males over 25 going about with syphilis in his system. What mischief such a vast stream of disease might work in the community was beyond human power to guess ! He spoke strongly against the sentimental morality that had led to the repeal of the contagious disease act in regard to venereal diseases.

In his presidential address before the Canadian Medical Association, Dr. F. J. Shepherd spoke with no uncertain sound. That his large and intelligent audience was with him was manifested by the hearty applause accorded his words. Would that he had power to legislate as well as to advise ! When the infection of the venereal diseases are regarded as a danger to the public, in the same way that the infections in diphtheria, and small-pox are now regarded, something will no doubt be done to control these affections.

Apart altogether from its propogation by prostitution, these diseases are sadly too common among the innocent, against whose lives no fault can be found. Many a person has contracted syphilis as a pure accident. Many a wife has had her health ruined by the disease given to her by her unsuspected husband. Many a child has had its future cursed by the sins of one or other of its parents. Many a one has died prematurely because of the ravages of syphilis in his system. And yet there is no regulation of these diseases ! The living embodiment of syphilis or gonorrhœa can go about giving the disease to his wife, or children, or others, either by sexual intercourse, or by accident, as the case may be.

It is sad to remember that syphilis, rivalled in its total capacity for wrecking happiness and health and life by no other disease, and

exceeded in apparent horror only by those whose effects are more sudden, is equally formidable by reason of our limited power over it. There are those who strongly oppose licensed places under proper inspection. Against the influence of this mistaken zeal for a nominal purity and a real disease we are powerless. But there is one preventive measure—a life of chastity ; and to the encouraging of young men to live such a life, let the medical profession give all its support.

PATHOLOGY AND TREATMENT OF SUMMER DIARRHOEA OF INFANTS.

IN the August *Practitioner*, Dr. W. Cecil Bosanquet, physician to the Victoria Hospital for Children, London, regards the pathology of the above disease in the following manner: A poison, such as tyrotoxicon, may produce vomiting, diarrhœa and collapse; and it is possible that some cases of summer diarrhœa may be due to poisons formed in the milk outside the body. The great majority of these cases are, however, due to the entrance into the body of pathogenic germs, and the toxins they produce. To these poisons are due the symptoms of toxæmia which characterize the disease. There may be a number of organisms responsible for these attacks; but, in the case of Asiatic cholera, a variety of morbid changes result from one and the same germ. It may be possible that the diverse morbid appearance in cholera infantum are caused by one form of germ. The nature of the toxin is not yet known. The blood is reduced in alkalinity, and it is thought that there is an "acid-intoxication." Hot weather favours the growth of the causal bacteria. The diarrhœa and vomiting are eliminative, and should not be checked. They may, however, require regulation.

In the first place, every effort should be made to prevent the disease. Food and milk must be in a sound condition. The intestinal canal must be cleared out as early as possible of all irritating matter. It would be as good treatment to seal up an abscess as to arrest the diarrhœa in these cases. In all severe cases, it is necessary to withhold milk for a time. It should be resumed with all due regard to its purity. Over-crowding should be guarded against, and fresh air is of the utmost importance. If the stools are watery, and contain little or no fæcal matter, it is well to omit milk, especially if the temperature rises. Meat juice and broths are not generally to be recommended. Albumen-water or barley-water may be the only diet permissible for several days. Cold water may be allowed freely to drink.

In the early stage of the disease when a purgative is required, none is equal to small doses of calomel. It is best given in small, frequent doses, gr. $\frac{1}{6}$ every hour, or $\frac{1}{3}$ or $\frac{1}{4}$ every three hours. This may be carried out for 24 hours. This may be followed by some soothing, antiseptic medicine, as bismuth. salicyl. gr. iii to gr. v, or sod. bicarb. gr. ii to gr. iii, or liq. hydrarg. perchlor. m. ii to m. iv, in mucilage and water. Resorcin in doses of gr. ii, every two hours has been found useful, so has B— napthol and salol. Some prefer small doses of castor oil to calomel as a purgative. Opium should not be given in the early stages, nor if there is any renal trouble. Its effects must be watched with great care.

Lavage has been highly praised by many. If there has been much vomiting and diarrhœa, it is difficult to see what further cleansing lavage can accomplish. Plain water, or normal saline solution, a drachm to the pint. A small rectal catheter is passed while the water is flowing. It is allowed to flow out beside the tube, when the gut is sufficiently distended, two or three pints being used. This treatment is only useful when the colon is affected.

For the high temperature, the best remedy is tepid to cold sponging, or the fluid used for the colon wash may be cool, but not quite cold. If the skin becomes dry and inelastic a wet pack may be employed, the child being left in the pack for several hours. The child may be enveloped in a towel wrung out of cold water and wrapped in a blanket. Some stimulant should be given before the pack.

REMOVAL OF THE BLADDER FOR CANCER.

A. LAPTHORN SMITH, M. D. Surgeon in Chief of the Samaritan Hospital for Women, Montreal, and Professor of Gynæcology in the University of Vermont, Burlington, etc., read a paper before the Canadian Medical Association at Montreal, 18 Sept, on the removal of the bladder for cancer with report of a case.

After reviewing the great advances which had been made in the surgery of the bladder in recent years, especially in the management of fistulae and injuries to the ureters. the author took up the subject of removal of the bladder. He gave a brief historical outline of one hundred published cases from which it appeared that when the operation of removal of the bladder was done for malignant disease the death rate was over 50 per cent.; while in cases of exstrophy and other non-malignant conditions, the death rate was only 19 per cent. He was strongly of the opinion that, with greater experience in technique, the mortality of the non-malignant cases would fall much below nineteen, while in the malig-

nant ones, when the disease was recognized and removed much earlier, the high death rate of over fifty per cent. would be reduced to less than twenty-five, just as it had been in hysterectomy for cancer which was 75 per cent. twenty-five years ago but was now less than five. He therefore urged all practitioners to look out for this disease, cystitis and hemorrhages being among the early symptoms, and not to lose precious time in unavailing local and medicinal treatment. His own case was misleading because she had a fibroid tumor the size of an orange pressing on the bladder, for which the patient was taken into hospital and the tumor was easily removed by myomectomy. Her bladder symptoms not being relieved, a button hole was made and the bladder explored by the finger when the cancer was found occupying the trigone. Two weeks later the abdomen was opened, peritoneum pushed back, ureters cut off and attached to vagina, and bladder removed together with enlarged pelvic glands. Patient rallied well and was making good recovery until sixth day when she rapidly collapsed and died. She was 65 years of age, in poor condition and the disease was too far advanced.

EDITORIAL NOTES.

College of Physicians and Surgeons.

We have very much pleasure in directing the attention of our readers to the advertisement in this issue, regarding the election of members of the Council of the College of Physicians and Surgeons of Ontario.

West Toronto Representative.

We understand that Dr. A. A. Macdonald will again be a candidate for the Medical Council. Dr. Macdonald's past record has been so satisfactory that he is sure of re-election. Indeed, there ought to be no opposition to his return. The best way the profession of West Toronto, can take of expressing its appreciation of his valuable services in the Council is to elect him by acclamation.

So-Called Christian Science.

Some time ago Rev. Andrew F. Underhill, of Yonkers, N. Y., delivered a series of short addresses on Christian Science. The Arlington Chemical Company has published these in neat little pamphlet form, and sent copies to the Medical profession. These addresses are particularly pointed and able, and well worth reading. If any of our readers have not received a copy, a request to the company will secure one.

Sir Walter Scott's Sickness.

Prof. Roberts Bartholow, in the *New York Medical Journal*, a short time ago, points out that from a study of the life of Sir Walter Scott it is apparent he had an attack in childhood of anterior poliomyelitis affecting the right leg. When he was 45 he began to suffer from attacks of gall stones and jaundice or cholangitis, as he had repeated spasms of pain, followed by a yellow color of skin and emaciation. When in his 69th year he had some sort of a fit and fell to the floor, losing consciousness for a short time. He had, in all, four such attacks. He finally lost the power of his right side, but not his speech. There was found, after death, three clots on the choroid plexus, and a soft part in the corpus striatum. The brain was "wet." There was no doubt atheroma of the vessels, with rupture, or embolism, an apoplexy; perhaps also chronic kidney disease, and the usual diseased arteries.

Sir Dyce Duckworth on Christian Science.

In his address at the opening of the session of the Medical College, Manchester, Sir Dyce Duckworth made use of the following words: "In this age of monstrous and obtrusive advertisement we know that almost any figment can, with sufficient money and pertinacity behind it, be readily foisted upon a large section of any community. So with absurd projects of investment and with a multiplicity of schisms and cults in religion. Consider, for example, that wicked and blasphemous nonsense which is now enlisting the support of many people in America, and of not a few well-placed persons in this country, so improperly called Christian science or faith healing. How much wisdom, think you, is concerned in tenets of that kind? Surely, in all these indications of mental feebleness and instability we witness the results of scanty knowledge, unbalanced and unchastened by any control derived from wisdom. What are they but conceits and airy delusions which must inevitably go to their doom in the future?

OBITUARY.

BERTRAM SPENCER, M.D., M.R.C.S.

DEEP was the sorrow felt by many medical practitioners throughout the country, when it was learned that Dr. Bertram Spencer was dead. A few days before his death, he slipped in a street car, sustaining a slight cut on his head. A severe type of erysipelas resulted from the injury, and, after a few days' illness, he succumbed to the attack, on

28th September. He was in his 49th year. Prior to studying medicine, he served for seven years in the British navy.

He took his medical course in Trinity Medical College, Toronto, and graduated, as M.B., at the University of Toronto in 1879. He spent some time in London in the study of his profession, and passed for the M.R.C.S., Eng. He commenced practice in Toronto in 1880. Dr. Spencer held a number of appointments. He was a coroner for Toronto. For several years he held a teaching chair in his alma mater college—Trinity Medical College. In 1892, he was appointed to the chair of Medical Jurisprudence in the Medical Faculty of the University of Toronto; and in 1898 was made Associate Professor of Clinical Surgery. At the time of his death, he held both of these positions.

During the last two years of his life, Dr. Spencer was truly "a man of sorrow and acquainted with grief." In 1900, he lost his daughter, and only child, to whom he was deeply attached. He was very much depressed by the loss of his child, and all could see that he was a sadder man. Then came a severe sickness to himself, in the form of an attack of septicaemia. Later came a spell of illness to Mrs. Spencer that threatened her life. Early in the spring of this year, he showed symptoms of diabetes mallitus. In September came the apparently trivial, but fatal, accident.

All who knew Dr. Spencer—and they are many—mourn his loss and early death. He was a thorough scholar, and a wise practitioner. Few men possess a finer sense of humor than did he, which rendered his company always so acceptable. He upheld the dignity of his profession well, living up to a high ideal. It was a great pleasure to meet him, either socially or professionally. In his case, *virtus incendit vires* was true in a special sense.

PERSONAL.

Dr. Paul, of Sebringville, cut his hand severely a short time ago, accidentally.

Dr. Wesley Mills, of Montreal, returned from Europe in the part of October.

Dr. W. H. Alexander, of Toronto, was married recently to Miss Edith Laird, of Chicago.

Dr. W. G. Tallison, late House Surgeon in Toronto General Hospital, has decided to locate in Lindsay.

Dr. Gordon F. Jackson has been appointed House Surgeon of St. Luke's Hospital, Ottawa.

Dr. R. A. Pyne, local member for East Toronto, was banqueted, 9th October, by his political friends.

Dr. J. L. Turnbull, of Goderich and Miss Jean McNair, of Cranbrook, were married Sept 30th.

Dr. W. O. Stewart, of Guelph, returned in the early part of October, after spending a few months in Britain.

Dr. Barr. M.P.P., for Dufferin, was thrown from his rig Oct. 23, and sustained a compound fracture near the ankle.

Dr. O. M. Jones, Victoria, B.C., and Dr. Alex. Hutchison, Montreal, were the guests of Dr. Riordan, of Toronto.

Dr. Edward D. Farrell has been appointed surgeon to the Fifth Royal Garrison Regiment, now doing duty at Halifax.

Dr. W. P. Thomson, of Toronto, was married to Miss Janet Carruthers, of Crocketford, Scotland, in the latter part of September.

Dr. Jenkins, of St. John, N. B., died at the Victoria General Hospital, Halifax, last month. Dr. Jenkins had been ill for some time.

The marriage of Dr. John I. Ferguson, of Courtwright, son of Dr. R. Ferguson, of London, and Miss Ruby Josephine Smith took place a few weeks ago.

The many friends of Dr. L. L. Palmer, of Toronto, will be glad to learn that he is recovering from the severe attack of septicæmia which he contracted, while performing an operation.

Dr. G. Carlton Jones, of Halifax, who went to South Africa with the Field Hospital, has returned. Dr. Jones contracted typhoid fever while in Africa but has completely recovered.

Dr. Andrew Halliday—Provincial Bacteriologist and Professor of Pathology in the Halifax medical college—has been compelled owing to ill health to give up his work for the present session. He will winter in Colorado. A number of Dr. Halliday's medical friends called upon him on the evening of October 14th, presented him with a purse containing $250.00, and expressed the hope that he might be much benefited by the change and that he would return to Halifax fully restored to health. Dr. L. M. Murray will attend to the duties of Provincial Bacteriologist during Dr. Halliday's absence.

BOOK REVIEWS.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE FOR THE USE OF PHYSICIANS AND STUDENTS.

By James Tyson, M.D., Professor of Medicine in the University of Pennsylvania, and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia, etc., etc., etc., Tenth Edition, Revised and Corrected, with a Colored Plate and Wood Engravings. Philadelphia: P Blakiston's Son & Co., Toronto: Chandler and Massey. Price, $1.50 Net.

THIS excellent little book, of nearly 300 pages, has now reached its tenth edition. Already over 25,000 Copies of the work have been sold. The book needs no commendations, as it is so well and favorably known that practically all physicians are acquainted with it. The work is thoroughly reliably in its matter, tersely and clearly expressed, well arranged, illustrated, and contains everything that the general practitioner requires. It contains the best, and nothing but the best, information.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Professor of Materia and Therapeutics in Jefferson Medical College of Philadephia; and H. R. M. Landis, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Vol. III., September, 1902. Lea Brothers & Co., Philadelphia and New York, 1902. Per Volume, $2 50, per annum, $10.00.

THERE are very few medical men who are not familiar with "Progressive Medicine," and there are none who ought not to take it. These quarterly volumes, year after year, constitute a reference library of great value. The present volume possesses all the attractive features of the previous ones, and is got up in the careful style of the well-known publishers.

The present volume deals with diseases of the Thorax and its viscera, including the Heart, Lungs, and Bloodvessels, by William Ewart, M.D., F.R.C.P., Senior Physician to St. George's Hospital, London; Dermatology and Syphilis, by William S. Gottheil, M.D., professor of Dermatology and Syphilology in the New York School of Clinical medicine; Diseases of the Nervous System, by William G. Spiller, assistant clinical Professor of Nervous Diseases and Assistant Professor of Neuropathology in the University of Pennsylvania; and Obstetries, by Richard C. Norris, Lecturer on Clinical and Operative Obstetrics, University of Pennsylvania. These names may be taken as a guarantee of the Contents of the present volume.

As it is impossible to note all the good things, we will give only two formulae :

℞ Resorcin, 30 grammes
Zinci Oxidi
Amyli, āā 20 grammes
Vaselinae (Yellow) qs., 100 grammes.

This is very useful in Lupus, and Dr. Max Joseph has employed it for two years with excellent results.

For Psoriasis the following is highly recommended by Blaschko :

℞ Iodi (pure) 0.6
Hydrarg. chlorid, mit. 1.8
Vaselinae ad 100.

Rochard's salve as above made, may irritate some skins ; but, as a rule, is very valuable, the plaques melting away.

SAUNDER'S QUESTION COMPENDS. ESSENTIALS OF DISEASES OF THE EAR.

Third Edition, Thoroughly Revised.

By E. B. Gleason, S. B., M. D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia ; Surgeon in Charge of the Nose, Throat, and Ear, Department of the Northern Dispensary, Philadelphia, etc., Third Edition, Thoroughly Revised. 16 mo. volume of 214 pages, with 114 illustrations. Philadelphia and London ; W. B. Saunders & Co., 1902. Cloth, $1.00 net. Toronto ; J. A. Carveth & Co.

THIS valuable little help, one of Saunders' Question-Compend Series, has reached its third edition. The book will be found of service, not alone as an aid to the student, but also to the physician who wishes to take a post-graduate course in Otology, enabling him, as it does, to acquire the rudimentary facts of the science with as little preliminary reading as possible.

The essentials of Otology have been stated concisely, without sacrificing accuracy to brevity. The diagnosis and treatment of diseases of the ear have been brought absolutely down to date by a thoroughly scrupulous revision ; only such methods of treatment being included, however, that have personally proved efficacious in the majority of cases. Besides carefully revising the old text, many interpolations of new matter have been made, thus somewhat increasing the number of pages in the present edition.

The illustrations—many from original drawings —have been selected with the aims of the book constantly in view ; and they form a very commendable feature of the work. Indeed, the little volume before us will unquestionably continue to be one of the most popular of Saunders' unequalled Question-Compend Series.

SAUNDERS' QUESTION COMPENDS, ESSENTIALS OF HISTOLOGY.

Second Edition, Revised and Enlarged.

By Lewis Leroy, B. S.,M. D.. Professor of Histology and Pathology, Vanderbilt University, Medical and Dental Departments; Pathologist to the Nashville City Hospital, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. 16 mo volume of 263 pages, 92 beautiful illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth $1.00 net. Toronto: J. A. Carveth & Co.

THIS valuable work has been designed not only as an aid to the beginner, but also to help the practitioner who, having graduated at a time when histology was not taught in all the colleges, desires to gain sufficient knowledge of the subject to facilitate his better understanding of pathology. Both these aims it admirably fulfils, as is evidenced by the demand for a second edition in so short a time.

In this edition a number of new original illustration, mostly photomicrographs, have been inserted to better elucidate the text. The chapter on Technic has been enlarged, a description of the appendix and rectal valves added,and the entire chapter,as,indeed, the entire book, thoroughly and carefully revised. As did the first edition, the work in its present form stands as a model of what a students aid should be; and we unhesitatingly say that the practitioner as well would find a glance through the book of lasting benefit

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A POCKET GUIDE TO ANAESTHETICS FOR THE STUDENT AND GENERAL PRACTITIONERS.

By Thomas D. Luke, M.B., F.R.C.S. Ed., Anaesthestist to the Deaconess Hospital, to the Dental Hospital, and Instructor in Anaesthetics to the University Surgical Classes, Royal Infirmary, Edinburgh. William Green and Sons, Edinburgh, 1902. Price 5s.

It is a genuine pleasure to review such a book as the one before us from the pen of Dr. Luke, and the publishing house of Messrs. Green & Son. The work is a neat crown 8vo. of 150 pages, bound in limp leather, printed on the very finest of heavy paper, well illustrated, gilt edges, and firmly stitched. So far as the publishers part is concerned, the little volume is perfect. The moderate price of 5s. net brings the book within the reach of all.

Turning to the author's share in the make-up of the little volume, we notice that he has illustrated the text with 43 very carefully selected cuts of apparatus and instruments, and the positions of the patient, for both local and general anaesthesia.

The author rightly contends that the administration of anaesthetics is a most important and responsible duty; and complains that sufficient

attention is not paid to the subject in most of the medical colleges. The practitioner has to acquire this knowledge usually after graduation. A short summary of the history of Anaesthetics is given from the year 1798, when Sir Humphrey Davey took nitrous oxide, down to the report of the British Medical Association committee in 1901.

In speaking on the choice of Anaesthetics, the remark is made that a person in reduced health is a safer subject than one in a healthy vigorous condition, as much less of the anaesthetic will suffice in the former, and there is less struggling. Anaemic persons usually take anaesthetics well, and there is not the need for such deep narcosis as in the strong and full blooded. Cases of valvular disease of the heart generally take chloroform well, but much care is required in producing perfect anaesthesia, and there is great tendency to syncope during recovery, or vomiting. In cardiac myasthenia, with fatty degeneration, or simple atrophy and dilatation, ether is strongly indicated, and nitrous oxide and chloroform as strongly contra-indicated. Insanity contra indicates nitrous oxide and ether.

Ether is objectional in renal disease, and chloroform in diabetes. Cases with dyspnoea, as in goitre and Angina Ludovici nitrous oxide is dangerous, and CE_2, or chloroform one part and ether two parts, is to be preferred. In cases of empyema, or troublesome cough, chloroform or CE_2 is better than ether alone.

With regard to the nature of the operation, the following general rules are laid down: Cases suitable for nitrous oxide are extraction of teeth, opening an abscess, tenotomies, aural polypi, movement of stiff joints, avulsion of nail, removal of external piles, scraping lupus, application of cautery, removal of drainage tube. Cases suitable for ether are amputations, osteotomies, reduction of dislocations, excision of joints, operations on the rectum, operations on genito-urinary organs, herniotomies and colostomies, removal of breast, most ovariotomies, in conditions of collapse or where the patient is much exhausted, in dental extractions of a prolonged kind. Cases suitable for chloroform are operations on head and neck, intracranial operations, excision of tongue or maxilla, abdominal operations where exaggerated Trendelenberg position is required, and cases of labor as a general rule. If the administrator has no experience with inhalers he had better use the open method, starting the anæsthesia, with chloroform and maintaining it with CE_2 other things being suitable as to the nature of the case and the operations. In feeble cases, an ounce of brandy with as much water may be given twenty minutes prior to the anæsthetic.

We pass over the excellent remarks on nitrous oxide and come to ether. It would be impossible to review fully what is said upon this

subject; but will mention the cases given as contra-indicating its use as protracted operations about the mouth, jaws, nose, or pharynx; operations requiring the cautery, or candles, or lamps; cases with bronchitis; cases of renal disease; where the arteries are brittle; in very young infants, on account of the risk of pulmonary trouble; in cases where rapid breathing and coughing would interfere with the operation; and in cases of brain tumor and intestinal obstruction

In the chapter on chlorform there is much sound advice. Among the many statements we note a few. The administrator is warned against dashing on the inhaler a large quantity at one time. The patient may struggle and take in too much at once. It should be given for ordinary adults at the rate of minims XXX every minute. Chloroform as an anaesthetic and toxic agent is ten times as powerful as ether. With regard to the blistering of the face the author remarks that if the inhaler be kept half an inch from the skin to allow "air way" there will be no danger, nor any need for vaseline on the skin. Besides, it is dangerous to permit the mask to fit too closely to the face. Chloroform anaesthesia is described under four stages. In the third stage there is automatic respiration, loss of conjunctival reflex, a fixed and more or less contracted pupil, and muscular relaxation. Unless these are present in the very large majority of cases no operative procedure should be undertaken. The fourth stage is one of overdose, and shows complete cessation of respiration, very feeble pulse, dilated fixed pupils, complete absence of lid reflex, dusky pallor of complexion, and separation of eyelids. If the drug be given rapidly and recklessly death may be very sudden. Paralysis of the respiratory centre is the most usual cause of death during fatal cases, but is often accompanied or immediately followed by paralysis of the cardiac centre, while primary cardiac failure is not unknown. A bad pulse may be caused from too little chloroform and also from too much. One must judge of the condition of the patient from no single sign, but from the breathing, condition of pupil, colour of lips, amount of chloroform given, the type of the patient, and the nature of the operation.

Under chloroform the pupil at first dilates. As the patient becomes unconscious it contracts. If it again dilates and is fixed and non-responsive to light, the patient is in a dangerous condition. The pupils dilate from the following causes: vomiting, vaso motor depression, too much chloroform, and commencing asphyxia or $C O_2$ poisoning. The two latter conditions are dangerous. A dilating and mobile pupil indicates more chloroform; a dilated and fixed pupil means stop chloroform and resuscitate the patient.

The troubles that are apt to arise during chloroform anaesthesia, apart from poisoning by it, are cessation of respiration, cardiac failure, vomiting, and the passage of food or mucus into the air passages. Cardiac failure, indepently of overdose may be due do fright or shock before anaesthesia is induced; to actual or threatened vomiting; to asphyxia from respiratory obstruction; and the strain of operation, loss of blood, or removal of fluid from the abdomen or chest. Deaths may be due to overdose, upright position, reflex cardiac inhibition, and undetected asphyxia.

Cessation of respiration may take place during the second stage of chloroform narcosis, due to spasm of the abdominal, thoracic and jaw muscles, the tongue being pressed against the palate and pharynx, especially in nervous, muscular, or alcoholic subjects. When this spasm passes off, there are usually a few deep inspirations and there is great risk of an overdose unless care be taken, as in this condition the heart is easily overpowered, being dilated and asthenic. Approximation of the aryteno-epiglottidean folds causes loud crowing breathing, relieved by drawing the tongue forward and stopping the chloroform.

We cannot review the portion of the book dealing with local anaesthesia, as it would require too much space. The author also examines into the death rate under chloroform and ether.

We would close our review of this book by saying that it is *multum in parvo maxime eruditum.*

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA.

DIPHTHERIA, MEASLES, SCARLET FEVER AND GERMAN MEASLES.

Diphtheria. By Wm. P. Northrup, M.D., of New York. Measles, Scarlet fever, and German Measles. By Professor Dr. Th. von. Jurgensen, Professor of Medicine in the University of Tubingen. Edited, with additions, by William P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, 3 of them in colors, Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

THIS volume, the third in the series of the English translation of "Nothnagel's System of Practical Medicine," needs no recommendation Professor Jurgensen and Dr. Northrup are too well known for us to expect anything but the best. The article on Diptheria, entirely original with the editor, is fully in keeping with the high standard set by the other German articles which comprise the work. Dr. Northrup, having been associated with Dr. O'Dwyer at every step in the perfection of

intubation tubes, is particularly fitted to describe this aspect of the treatment of diphtheria.

Professor Jurgensen's monograph on Measles unquestionably is the most comprehensive contribution on that infection that has appeared, bringing out so fully the valuable Danish records of the Faroe Islands epidemic. His exposition of Scarlatina is unrivaled both for richness of clinical detail and exactness and clearness of statement. "Fourth Disease" and German Measles have been accorded spaces consistent with their importance. The editor has shown judicious decision in his extensive additions, making the work far and away the best and most up-to-date treatise of the subjects extant. The book is profusely illustrated, containing, besides a large number of text cuts, twenty-four full-page plates, three of which are in colors.

Dr. W. P. Northrup handles the subject of Diphtheria in a full and through manner. It is stated that in cities the disease is endemic, but the number of cases and their virulence vary from year to year. In country districts it occurs as a rule in epidemics. Diphtheria is always due to the germ from some previous case; and, as the germ may live for many months outside the body, it is not hard to account for the appearance of isolated cases. There are mild cases, cases of catarrhal diphtheria, and cases of diphtheria rhinitis, where a diagnosis is not made, and are very liable to spread the infection. The disease may be spread by means of utensils, towels, bedding, clothing, toys books. The statement that "the hands and clothing of physicians and nurses in attendance on diphtheria cases are undoubtedly a frequent source of infection" will, we think not meet with general endorsation. It would be one of the rarest of experiences to meet with a physician, however large his practice, or honest his intentions, who could say that he was ever aware of having carried the disease from one child to another, or from house to house. Milk is given as a rather common cause for the spread of the disease. Kober is quoted to the effect that 13 out of 36 epidemics studied by him were due to infected milk. Defective drainage may be a cause for poor health and lowered resistance, nevertheless the Löffler bacillus must always be present to cause the disease.

Klebs discovered the bacillus in 1883. In 1884, Löffler obtained a pure culture and produced the disease in animals by inoculation; but he was not positive that this bacillus was the specific cause. In 1888, Roux and Yersin were able to establish this specificity beyond a doubt. The bacillus is non-motile, non-liquifying, grows readily in presence of oxygen, but also without it, does not form spores, is killed in ten minutes by a temperature of 136F., and lives for a long time in dried membrane, by one observer for 5 months.

The bacillus is pathogenic for guinea-pigs, rabbits, chickens, pigeons, small birds, and cats; and, in a lesser degree, for dogs, goats, cattle, and horses. Inoculation tests in animals have revealed the presence of the characteristic paralysis. When diphtheria is communicated to an animal by inoculation, unless the dose is very large, the germs remain at the seat of inoculation, and are very rarely found in the internal organs. But this does not correspond to what takes place in natural human diphtheria. In the human subject the best observers have found that the bacilli are found in the internal organs. This general infection occurred usually in cases of septic diphtheria. An interesting point in the work is the emphasis given to the fact that virulent Klebs-Löffler bacilli may be found in the throats and noses of persons who show no signs of the disease. This is specially true of those coming in contact with persons who have the disease. On the matter of mixed infection, it is stated that the condition is common; and the streptococcus, staphylococcus, and pneumococcus are most frequently found along with the diphtheria bacillus.

Much attention is given to those bacilli which closely resemble the Löffler, and are known as pseudo-diphtheria bacilli. He concludes: "It may be said in brief, that a given diphtheria like bacillus which produces little or no acid in bouillon cultures, that shows no or only atypical polar granules in a twelve to twenty-four hour-old blood-serum culture, and is never pathogenic to guinea pigs, may be safely classified as belonging to the great class of pseudo-diphtheria bacilli."

Passing over the remarks on the pathology of the various organs, we note that he divides the disease clinically into the following groups: Catarrhal Diphtheria, or those cases in which are found only redness and severe swelling of the pharynx and tonsils; Fibinous Diphtheria, or those cases of pure Löffler bacilli infection, local in nature, and the presence of false membrane; Mixed, Phlegmonous, or Strepto-diphtheria, or those cases due to the association of some other germ, usually the streptococcus, along with the Löffler bacillus; Septic, or Gangrenous Diphtheria, or those cases developing into a septicæmia, the reason for which is not well known, but thought to be due to a mixed infection invading the general system.

The author accords high value to the diphtheria anti-toxin. When used on the first day, the death rate is about 3 per cent.; when used on the second day, 8 per cent.; on the third day, 13 per cent.; on the fourth day, 23 per cent.; and on the fifth day, 35 per cent. The dosage recommended is: From 2,000 to 3,000 units for a child over one year in an ordinary case; from 3,000 to 5,000 units for a severe case; for a child under one year, 1,500 to 2,000 units. These doses are to be repeated in 12 hours,

or less, if the symptoms are increasing. He claims that immunity for about a month can be obtained by small doses of 100 to 500 units. It is of much value used in this way, in instances where children are exposed to contagion.

The second portion of the work is from the pen of Prof. Theodor Von Jürgensen, and takes up measles, scarlatina, and Rötheln.

The author discusses at considerable length the theory that the acute exanthemata are of common origin. He holds that vaccinia and smallpox are of common origin. With regard to the others he remarks that "measles, scarlatina, smallpox and varicella are distinct diseases; they cannot be traced to a common source, and do not represent merely offshoots, variously modified, from one and the same root." His reasons for setting aside the theory of common origin are: The period of incubation varies, the clinical features vary, these diseases do not protect against each other, and they may occur together in the same person.

Some pertinent remarks are offered on the "Fourth Disease." It is concluded that the evidence is not yet such as to justify us in admitting it as an independent disease. The leaning is in favour of the view that the "Fourth Disease" is a modified scarlatina, a Rubella scarlatinosa.

The work, as a whole, is a masterpiece, both as to publication and authorship.

TWENTY-FIFTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY ANDREPORT OF THE BUREAU OF VITAL STATISTICS 1901.

Trenton, N. J. The John L. Murphy Publishing Co., Printers, 1902.

THIS volume contains much useful information on the topics of public health, infectious diseases, and isolation hospitals. Persons interested in such questions will find the volume very helpful. The report of the secretary is very full, and a number of special papers deal with such matters as smallpox, scarlet fever, diphtheria etc.

MISCELLANEOUS.

PEPTO-MANGAN FOR YOUNG GIRLS.

DR. E. C. HILL, Denver, praises Pepto-Mangan (Gude) very highly for delicate girls about the age of puberty, and after menstruation commences, when they become anæmic and chloratic. There is rapid increase in the blood.

THE TREATMENT OF GRANULAR PHARYNGITIS.

M. MOURE (*Presse médicale*; *Journal de Bruxelles*, June 19th) recommends painting the back of the throat twice weekly with the following:

℞ Iodine ..... 0.25 grammes (3¾ grains)
Potassium iodide ..... 0.30 grammes (4½ grains)
Laudanum ..... 3.00 grammes (45 minims)
Glycerin ..... 120.02 grammes (4 ounces)
M.

This may also be used as a gargle in a strength of a teaspoonful to half a tumblerful or a tumblerful of tepid water.

The author also recommends the use in similar proportions as a gargle, or pure as a local application, of the following:

℞ Sodium biborate ..... 6 grammes (90 grains)
Antipyrine ..... 4 grammes (60 grains)
Tincture of guaiacum ..... } aa 5 grammes (75 minims)
Spirit of peppermint ..... }
Neutral glycerin ..... 140 grammes (4½ ounces)
M.

GLYCOZONE IN PTOMAINE POISONING.

DR. A. RIXA, in the Medical summary, writes as follows regarding some cases of poisoning by fish and oysters: "I prescribed an antespitic intestinal wash, Glycozone, two ounces, hot water, twenty-four ounces, for mornings and evenings. At my evening's call the temperature was 100; pulse 110; respiration, 28. Having had some favorable experience with the internal use of Glycozone in acute gastritis I then prescribed a teaspoonful to be given, diluted with water, every three hours. This treatment was kept up for a week, until all unfavorable symptoms disappeared"

SANMETTO IN PROSTATITIS, ENURESIS, CATARRH OF BLADDER.

In prostatitis, enuresis, catarrh of bladder and all diseases of the genito-urinary system, J. T. W. Kerns, M.D., Bellaire, Ohio, has found Sanmetto indispensable to him.

BOVININE IN ENDOMETRITIS.

In this condition much benefit has been derived from the topical and internal employment of bovinine. The uterus is washed out with bovinine two parts and salt solution one part, and the vagina tamponed with pure bovinine. Two teaspoonfuls were given internally every hour in peptonized milk. The local treatment was done twice daily.

THE CANADA LANCET

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THE ASYLUM, THE HOSPITAL FOR THE INSANE, AND THE TEACHING OF PSYCHIATRY.*

By STEWART PATON, M.D.,

Associate in Psychiatry, Johns Hopkins University; and Director of the Laboratory, Sheppard and Enoch Pratt Hospital.

THE Alienist is frequently asked if individuals who are mentally deranged receive as good care in a hospital for the insane as patients in the wards of a general hospital. Unfortunately, this question must be answered in the negative. Nor is the main reason for this disparaity far to seek, if we consider for a moment the striking differences in the organization of the two classses of institutions.

In our general hospitals the medical care of the patients is entrusted to a staff the individual members of which are expected to devote themselves solely to the discharge of their professional duties. In the hospital for the insane the medical officers are fortunate if a large part of their time and energy is not absorbed in the performance of purely administrative work. Those of you who are familiar with the present system of organization in these institutions will appreciate this fact Recently the medical superintendents of three of the best known hospitals for the insane in the United States have in my hearing expressed dissatisfaction with a condition of affairs that gives them so little opportunity or leisure in which to study the patients entrusted to their care. The importance of such an expression of opinion can hardly be over-estimated, for it means that the men best qualified by experience to judge such matters appreciate the existence of a radical defect and would be among the first to welcome a thorough reorganization of our hospitals for the insane. When a physician-in-chief finds that it is impossible for him to keep abreast of the times in the practice and study of his profession the work of all his associates on the medical staff must inevitably suffer from the lack of efficient and capable criticism, while, at the same time, they are deprived of an enthusiastic and inspiring leadership. In the face of such condition of affairs, the general medical public seeing that the resident physicians in our hospitals for the insane are permitted to devote only a portion of their time to their professional duties may

*Read by invitation at the Meeting of the Canadian Medical Association Montreal Sept. 17th 1902.

be pardoned if they infer that very little is known regarding the causes and treatment of insanity and consequently conclude that the commitment of patients to hospitals for the insane is indicated only when all other methods of treatment have been tried and proved to be of no avail. As a result of this unfortunate belief, many cases of mental disorder, which might have been cured had they been dealt with in a hospital at the onset of the attack, are left without proper treatment until they have become hopelessly chronic.

Physicians as a rule do not willingly admit that metaphysics has influenced the practice of medicine. Nevertheless, the present defect, in the organization of our hospitals for the insane, is a concrete example of the potency of the belief, once generally entertained, to the effect that the ills to which the *materia cogitans non extensa* was heir, were too intangible to admit of any successful therapy. A strict adherence to the letter of the Cartesian philosophy would doubtless relieve the alienist of responsibility so far as many cases coming under his observation are concerned. It is fortunate, however, that there is to be found an increasing number of those who believe that, in all cases of insanity, there is an organic lesion situated, sometimes above, but quite as often, below the diaphragm. Even a slight degree of familiarity with the psychological reactions, produced by "calomy and laudamy," or with brimstone and molassses, should be sufficient to demonstrate the impossibility of always distinguishing clearly between the *materia cogitans non extensa* and the *materia extensa non cogitans.*

Improvement in the medical care of the insane, as well as hope of progress in the study of psychiatry, depends primarily upon the adoption by the managers of our hospitals for the insane of a system which shall make it possible for the medical officers in these institutions to devote themselves solely to their professional duties. Let us consider briefly how these ends may be attained. The most efficient and capable medical officers can only be found in those institutions in which the methods of organization are similar to those employed in the best general hospital. It must not be understood that I am advocating the introduction at present of such methods into all institutions devoted to the care of the insane. Reference is made solely to those which have assumed the name of hospital The term asylum is generally assigned to the institutions which are given up solely to the care of the more chronic forms of alienation. The hospitals for the insane are of two classes. First, there is the type of hospital best represented by the German Psychiatric Clinic and of which we unfortunately have no counterpart on this side of the Atlantic. Secondly, generally in or near a large city

there is an institution formerly called an asylum but which having now assumed the name of hospital is in a stage of transformation. With reference to the first class, it is difficult to believe that the present century will pass without either the state or private munificence giving to the insane in all our large cities the benefits to be derived from the erection of fully equipped modern hospitals similar in construction and organization to the psychiatric clinics at Berlin, Kiel, Giessen and other German cities. The institutions are situated in the heart of the city. They have accommodations for from 80 to 200 patients. The physician-in-chief as a rule is professor of psychiatry in the university and is also engaged in active practice as an alienist. He, as well as the other members of the medical staff, is entirely free from administrative duties. Think of the amount of enthusiastic interest in the profession that may develop in the members of the medical staff, in such institutions, where the ties, binding this with the other departments of the university, are so numerous. Can there be a more worthy object of philanthropy than the very liberal endowment of such institutions in all our large cities, so that not only may the insane have the benefit of the highest medical skill, but at the same time every opportunity is given to those who are endeavoring to discover the laws, upon the keeping of which, mental vigor and sanity depend. It is interesting to note that, according to German alienists, the spirit which gave birth to the movement resulting in Germany's great advance in the care of the insane had its origin in the philosophy of Hume and Locke. The "philosophy of common sense" popularized in France by Voltaire, Diderot, Rousseau and others, and by these teachings the reformer Pinel was profoundly influenced. Nevertheless, as a French alienist has recently pointed out, the great reforms in the care of the insane, instituted in France, England and America, at the beginning of the century, have not been carried forward in these countries which, in this respect, have lagged far behind Germany. More than fifty years ago Comte* said: "There has been plentiful study of monomania, but it has been of little use for want of a due connection and comparison with the normal state. The works that have appeared on the subject have been more literary than scientific; those who have had the best opportunity for observation have been more engaged in governing their patients than in analyzing their cases; and the successors of Pinel have added nothing essential to the ameliorations introduced by him half a century ago in regard to the theory and treatment of mental alienation." Let me now ask your

* The Positive Philosophy of August Comte, Bohm's Philosophical Library, Vol. II., p. 133.

attention to a few considerations in reference to the second class of institutions—those which within the last decade or two have assumed the name of hospital. If one reads the annual reports of these institutions it will be noted that frequent reference is made to the fact that a neurologist, neuropathologist, or a pathologist has been added to the staff. In some instances investigations in physiological psychology have been attempted. It is not my purpose to belittle the services of those who have successfully advocated the necessity of these changes. Little permanent good, however, either in increased efficiency of the staff or in the discovery of new facts, relating to the causes of mental disease, can be expected until the organization of these institutions is so changed that the standards, by which the professional capabilities of the medical officers are gauged, are as high as those now required by the managers of our best general hospitals. To aid in the accomplishment of this end an advisory medical board, the members of which have had practical training as attending physicians to a general hospital,should be appointed. This advisory board would act in conjunction with the physician-in-chief and the trustees of the hospital, their services becoming all important by demonstrating clearly to the lay members the absolute necessity of distinguishing clearly in matters of organization between the institutions intended for the chronic, and those for the acute and consequently more hopeful cases of alienation.

The effective organization of a hospital for the insane, in which the medical care of the patients is as good as that afforded by our best general hospitals, depends upon the recognition, by the managers, of the importance of the following fundamental principles. (1) The reorganization of the institution must rest on a basis that shall make it possible for the medical officers to devote their time solely to the performance of their professional duties. (2) The best results in the treatment of patients suffering from acute mental disorders can be obtained in a hospital so organized, even without many of the accessions that are a necessary and integral part of the asylum. The huge grounds, farm, outbuildings, amusement pavilions, etc., all useful adjuncts in the treatment of chronic cases are either unnecessary, or of secondary importance, in connection with the work of the hospital. When patients have reached the stage, in which the therapeutic measures, made possible by the existence of such accessories are indicated, they are either well along in convalescence or have reached the chronic stage in their disease and are then better off in an asylum. I think a fair and impartial observer, who is thoroughly familiar with the organization and conduct of affairs in our best general hospitals, must admit that, while these institutions are admirably adapted to the treatment of patients, the same cannot be

said of our hospitals for the insane. In this second class of institutions admirable provision is often made for the care of convalescent patients, but there is a marked deficiency of the means, as well as methods, best adapted to the treatment of patients in the earlier and more acute stages of their disease. (3) The managers of these institutions, as they become more familiar with the conduct of affairs in our general hospitals, will doubtless realize that not only is the efficiency of the medical staff greater in those hopitals in which regular clinical teaching of student is practiced, but that under these conditions alone is it possible to bestow upon the individual patient the benefits to be derived from careful methodical study and observation of his case.

Unfortunate as are the existing conditions in the organization of our hospitals for the insane, physicians must remember that the laymen who are trustees of our institutions are not solely responsible for the present attempt to make bricks without straw. In the United States, and, so far as I know, in Great Britian, there is no opportunity presented for as careful bedside instruction in the study of mental diseases as there is in other departments of medicine. Where then can those who propose to become resident officers in our hospitals for the insane receive their training? Whence can the medical expert, whose opinion is frequently couched in terms of apodictical certitude, gather the facts which justify such an expression. Largely I fear only from his inner consciousness. Where can the family physician, who should have a practical knowledge of certain forms of mental disorder, get any clinical training in psychiatry? At the present time, nowhere.

Some of the beneficial results that would be sure to follow the reorganization of hospitals for the insane along the lines indicated may be summarized as follows: Physicians in general would naturally gain greater confidence in the efficiency of the medical staffs of these institutions; and, as a result, many patients would be referred to these hospitals for treatment, at a time when satisfactory results might be expected. The complete separation of the hospital from the asylum would clearly indicate that mental disorders are of essentially the same nature, and are amenable to treatment similar to that which is applicable to other bodily maladies. Not only would the highest class of men in the medical profession be attracted to become medical officers in these institutions: but they would also be given every opportuntity to devote their talents to advancing our knowledge of the causes and best means of preventing the increase of insanity. Doubtless, a strictly modern hospital for the insane would become, in time, the recipient of donations which would render it possible for investigations, along scientific lines, to be prosecuted on a scale that would be productive of the best results

CLINICAL NOTES ON GYNECOLOGICAL CASES AT THE SAMARITAN HOSPITAL FOR WOMEN, MONTREAL.

By A. LAPTHORN SMITH, M. D., Surgeon-in-Chief.

THE feeling is growing in the profession that the pendulum of medical education has swung a little too far in the direction of pathology, to the neglect of the study in nature's laboratory at the bedside. It may, therefore, interest your readers who are general practitioners to hear some remarks on the cases which came into this hospital during the month of February of this year, because they were just the average kind of cases which the family physician is constantly meeting with The cases for January were the subject of a little paper which appeared in the August number of the *Canada Medical Record.*

The first case was Mrs. P., aet 48, who was sent in by Dr. S. F. Wilson, because he suspected cancer of the uterus. Dr. Wilson has had a large experience as a general practitioner and has been for several years my first assistant at this hospital and he has seen so many cases of cancer of the cervix sent in here too late for any operative treatment that he has become thoroughly imbued with the importance of recognizing the disease at the earliest possible moment and in losing no time in having it removed while it is still localized in the uterus. So that when this patient sent for him and stated that she was having hemorrhages every ten days to such an extent that her brain was beginning to suffer and that she had had the change of life some years before, he insisted upon making an examination at once. Although nothing could be felt on the cervix or uterus except that the latter was large, on this one clinical symptom of hemorrage after the menopause alone, he urged removal of the uterus. I was strongly in favor of this course and vaginal hysterectomy was therefore done on the 6th February, clamps being used. These were removed in forty-eight hours, after which mild permanganate douches were given every day to prevent the unpleasant odor, care being taken not to introduce the syringe too far. She was up and around in ten days and went home in twenty-one days after her admission. On cutting open the uterus the hemorrhage was found to be coming from an angry looking ulcerated surface near the right uterine cornu the size of a quarter of a dollar. On further examination this was found to be cancer of the fundus. The patient has been seen recently and is doing her own housework and is in good health. I consider that her life has been saved by Dr. Wilson's prompt action, and I trust that his example will be followed in the hundreds of cases which are at present being diagnosed too late.

Mrs. D., 52 years of age, came to the Montreal Dispensary complaining of a purulent and offensive discharge from the vagina. She had her change of life eight years before and she had been attending her sister who had died of cancer of the breast and had ample opportunity of becoming infected, if the disease is contagious, as I believe it to be. On examination it proved to be primary cancer of the vagina, but too far advanced to permit of any radical operation. The best I could do for her was to curette away the sloughing, necrosed part of it, and to apply a saturated solution of carbolic acid. She has been curetted once since then, but is now nearing the end.

Mrs. P., aet 27, was sent in on the 10th February by Dr. S. F. Wilson, for appendicitis, and although she was seven or eight weeks pregnant, I did not hesitate to operate rather than leave her in suffering and danger. It is my opinion that many deaths, from what is supposed to be puerperal septicaemia, are really due to an unrecognized appendicitis which suddenly bursts out with fulminating fury at the time of labour. There had been a history of pain in the right side since she was a girl; she had had one living child and two miscarriages before coming in. She was in such pain when she came in that we did not think it safe to spend a few days in preparation as we usually do, so she was carried to the bath and had a good scrubbing and was operated on next day. I found the ovary tube and appendix all adherent together, but was able to remove them without any difficulty. The left ovary and tube were not removed. I might mention that I never tie the appendix vermiformis en masse but cut it off even with the coecum and then close this hole as I would a bullet wound with two layers of silk stitches; one for the muscular layer and another for the peritoneun and when the latter are tied it is almost impossible to see where the appendix had been. She had a miscarriage three days later but otherwise made a splendid recovery; she has been seen frequently since and is absolutely cured of the pain which she had had in her right side for so many years.

Mrs. M., aged 49, was sent to me on the same day as last case by Dr. Maas for the single clinical sign of hemorrhages coming on several times a month, several years after the menopause. On examination I found a lacerated cervix pretty badly attacked with cancer. Two days later, which was the first day I had disengaged, I removed her uterus by the vagina without any difficulty, using clamps and every antiseptic precaution and the result has been excellent. She has been seen frequently since and appears to be in good health and spirits. A vaginal examination was made eight months later and there is no sign of recurrence.

Miss G., aet. 24, was sent in on the 12th February by Dr. McNamara for severe pain in the two ovarian regions ever since she was twelve years old when she first menstruated. I was loth to remove both ovaries from such a young girl and therefore five days later I removed one and a half ovaries but not the tubes, so that if she married she might have children. But I regret this conservative course, which I have been trying for a little over two years in all the young women. One of my principal objects was to prevent the premature menopause and it has not only done that but, I am sorry to say, many of these women are having menorrhagia so severe as to prevent them from keeping their situations, and on weighing the pros and cons I have almost come to the conclusion that it is better to remove both tubes and ovaries in these cases; the results have been more satisfactory on the whole in those in which I have done this; while those who do suffer from the hot flushes are pretty well over them in a year and after that enjoy good health. This patient although free from pain is worse in other ways, owing to the menorrhagia.

Mrs. F., aet. 31, a very stout woman weighing 240 lbs., was sent in by Dr. Smythe for repair of lacerated cervix which prevented her from taking any exercise and thus caused the obesity. She has not been seen lately but was doing her own work in a pretty large house when last heard from. The curing of reflex nervous symptoms following the repairing of a lacerated cervix is one of the surest as well as the most wonderful things in gynæcology.

Mrs. T. was sent in by Dr. S. F. Wilson in a rather alarming condition. She had had a miscarriage, for which she was carefully attended, but, notwithstanding, she developed a high temperature and all the symptoms of pelvic peritonitis. We would have preferred to open the abdomen and to remove one ovary and tube but at no time was she in a fit condition to bear a major operation. As she was having very fluctuating temperature and we could feel a mass projecting into the vagina we decided to open this under aseptic precautions and drain into the vagina. The result was remarkable. In five or six hours her temperature was normal and her pulse improved so much that in ten days she went out almost well. Although we warned her that we had not removed the diseased organ, which would probably have to be taken out later, she is in excellent health and perfectly free from pain.

Mrs. B., aet. 25., was sent in by myself for amputation of a badly ulcerated and lacerated cervix. It would have been impossible to do an Emmett in this case without waiting many weeks to get the inflammation reduced so that the lips could be brought together. And moreover, if I had done an Emmett she would probably have been lacerated again

at her next confinement. By my new method of amputating the cervix the uterus is left shorter and lighter and the first stage of the next confinement is exceedingly easy. I have seen none of the bad results mentioned in a recent article; on the contrary, in my cases this operation has left nothing to be desired. She made a good recovery.

Mrs. C., aet. 35, a widow, came in for curetting. She was losing ten or twelve days every month. She has not been seen since she left the hospital but we have heard that she has been married since, and that she is now in good health.

Mrs. B., aet. 38, was sent in by Dr. Smythe for a cauliflower mass of the cervix, completely filling the vagina. She had gone to the Metropolitan Dispensary for hemorrhages, which she was having every month, and the mass could be seen bulging out of the vulva. Although we considered her case hopeless, as far as ultimate cure was concerned, yet we thought that it would prolong her life to remove first the mass and then the whole uterus. The mass was first removed with the écraseur, then the uterus was covered with a gauze bag and the whole organ removed with clamps *per vaginam*. She was very much benefitted by the operation and could hardly believe that she was as bad as we thought. I told the doctors present, who asked how long I thought she would live, that I would give her five months. But she is alive after eight months and I have curetted the scar once since; but she cannot live much longer.

Mrs. M., aet. 40, was admitted on the 18th February by Dr. Field, who curetted her for a miscarriage.

Mrs. E., aet. 39, was admitted on the 22nd February for a very troublesome cystocele. She had already had an Alenande operation performed on her three months before and this was successful in keeping the uterus forward; at the same time she had dilatation, curetting, repair of a lacerated cervix, and an operation on the perineum all at the same sitting, and I had had great hopes that this would have cured the cystocele, which was causing frequent micturition. I therefore decided to do a Stoltz operation, which I have generally found very satisfactory; it consists in removing an oval piece from the anterior vaginal wall, which is then brought together with a silk worm gut purse string. She made a good recovery from this but had some other trouble which later necessitated the removal of the ovaries and tubes. She is now perfectly well.

Mrs. P., aet. 38, mother of seven children, was sent in by Dr. S. F. Wilson, on the 24th of February, for cancer of the right breast, the left one being unaffected. Two days later the breast was removed, including

the fascia covering the pectoralis major muscle and all the glands and fascia and cellular tissue in the axilla. She made a good recovery from this and three weeks later the cervix,which was lacerated and ulcerated, was amputated, which operation I prefer whenever there is much swelling or erosion. She went home two weeks later. With regard to the removal of the breast for cancer it is a pity that family physicians do not send these cases for operation earlier. Dr. Wilson sent her in within a few days of his first seeing her, but I have had many other cases which had been under observation for many months, thus allowing the precious moments to pass day after day and month after month until the time for successful operation had passed. Although every one from whom I have amputated the breast has recovered from the operation, even including those which were so advanced that I had to remove both pectoralis major and minor muscles, yet at the end of two years every one was dead from recurrence in whom I had done this very radical operation, notwithstanding that I had removed every apparent vestige of the disease. The only ones who are alive, and they are all alive and well, are those who were sent to me early, while there was only a lump in the breast, with or without retraction of the nipple. Every breast with a chronic swelling in it in a woman over thirty-five years old should be removed at once.

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STERILIZATION OF CAT GUT.

DR. E. C. DUDLEY, in his work on gynaecology, recommends the following method of preparing cat gut for ligatures and sutures. 1. The gut is tightly wound on sections of glass tube, and the ends are secured. This prevents contraction or thickening on boiling. 2. The fat and other soluble substances are removed by soaking for twelve hours in ether. 3. The gut is transferred to a 5 per cent. solution of formaldehyde and soaked in it for twenty-four hours. 4. The tubes are kept under constantly running water for twenty-four hours, to wash out the excess of formaldehyde. 5 Final sterilization is secured by boiling twenty minutes in water. The formaldehyde renders the gut brittle, but its tensile strength is restored by the boiling, which may be repeated one or more times without material injury to the gut. After boiling the gut may be preserved in absolute alcohol, or it may be boiled just before use. Gut prepared in this way will resist absorption for six weeks or longer.

THREE CASES PRESENTED BY DR JAMES STEWART BEFORE THE CANADIAN MEDICAL ASSOCIATION.

Reported by MALCOLM MACKAY, B.A., M.D.

DR. James Stewart conducted a clinic on the following cases at the Royal Victoria Hospital during the recent meeting of the Canadian Medical Association. The clinic was illustrated by lantern views, the majority of these being photographs of the patients taken at various stages of their illness.

The first patient shown, a coachman aet. 25, entered the Royal Victoria Hospital on March 4th 1902 complaining of headache, together with numbness and weakness of hands and feet. He had been healthy until February, 5th '02, when, after exposure to cold and wet, he began to be troubled with pains in the upper part of his chest before and behind, these pains were particularly severe in the cardiac region. The patient gradually improved, but about a fortnight later, after further exposure, the pains returned, accompanied by swellings about the size of a hen's egg, which appeared in front of his shoulders, quickly followed by similar swellings at the elbow joints and above the left trochanter. These nodules were not in themselves painful or tender and they soon vanished under the local application of iodine. On February 25th headache was first noticed, followed by pain in the back and tingling and weakness of the extremities. The weakness progressed rapidly and on admission the patient could walk with difficulty.

Inquiry into the family history brought out the fact that both his mother and sister died of pulmonary tuberculosis, while nine brothers died before the age of seven,of 'Inflammation of the brain' (the symptoms resembled those of meningitis). The personal history was negative on inquiry, although subsequent examination revealed a chancre on the penis and a rash on the back. The heart, lungs, glandular system, blood, and urine, were normal. Examination of the nervous system showed marked weakness of the muscles of the extremities, the flexors of the ankles being particularly weak. There was no wrist drop,and the flexors and extensors of the forearm appeared to be equally involved. Some inco-ordination was present in both extremities,but it was slight. The tongue was protruded normally, but the patient had difficulty in whistling and in closing the right eye. There was no involvement of the occipito-frontalis but there was some weakness of all the extensor muscles of the eye. Sensation to touch, pain, and temperature were all diminished in the extremities, and there were patches of anæsthesia on the face and chest. The muscles were very tender on pressure all over the body. The organic reflexes were normal, the deep reflexes were absent, while the superficial reflexes were present.

The condition of the patient became rapidly worse, and on March 9th he could not protrude his tongue beyond the teeth, could not close his eyes or whistle, and could not raise himself in the bed. On March 10th all movements were painful and performed with great difficulty and the patient was so weak that he could not raise his head from the bed, while the diaphragm showed signs of paralysis—the intercostals remaining unaffected. Tenderness of muscles, especially those of the face, was extreme, the slightest touch being painful. Later in the day dyspnosa became marked and the patient could not clear his throat of the mucus which accummulated. His face was utterly expressionless and he could not move a muscle. Next morning he appeared to be rather better and by March 14th he could breathe comfortably, although still unable to close his eyes, raise his upper lip, or wrinkle his forehead. From this time on he improved steadily and by April 4th was able to sit up in a chair. On April 18th he was discharged, feeling well and able to walk a considerable distance, although there was still slight tenderness of the muscles on deep pressure and the knee-jerks had not returned.

When presented before the society the man was in good health, and the reflexes had returned to their normal condition. The etiological factor was doubtless syphilis, and the improvement was rapid when mercurial inunctions were commenced.

The second case was that of a Hebrew merchant, aet 37, who was admitted to the hospital on Sept. 23rd 1901, complaining of pain in the back, weakness of extremities and paralysis of the lips. On Sept. 15th he was perfectly well and in fact was able to deliver a lecture, during the course of which he became intensely excited. On the following day he was exposed to the cold and wet, and on waking next morning noticed some numbness and weakness of the lower extremities. This weakness increased so rapidly that by the afternoon he was unable to walk.

By September 21st he had become so weak that he could not move a limb, or even turn in bed without assistance, his lips also were paralysed and he suffered such intense pain in the legs that he was unable to sleep. On admission nothing abnormal was found in the heart, lungs, glandular system, or blood, while special chemical and physiological tests of the urine by Dr. Bruere revealed nothing; however his mouth was very foul, the gums being ulcerated and teeth covered with sordes. His family and personal history proved to be good, with nothing indicating any toxic origin of the trouble. Further examination showed that he was unable to sit, stand, or walk, but could raise his legs a little off the bed. There was a marked facial paralysis, the patient being unable to show his teeth, close his eyes, or wrinkle his forehead, although he could partially protrude the tongue. There was no objective sensory

disturbance, but subjectively the patient complained of numbness of extremities and pain in the back, there was also slight tenderness of the muscles on deep pressure. The superficial and deep reflexes were absent, but no muscular wasting could be made out. By September 25th the patient's condition had become decidedly worse and he was unable to raise his feet off the bed, but from this date he improved steadily, and on September 29th he was able to close his eyes and wrinkle his forehead. On October 8th he had retension of urine and incontinence of fœces, but apart from this was feeling much better, and by October 11th his strength had markedly improved, by this time also the organic reflexes had returned to their normal condition. By the end of October he was able to sit and stand, and with assistance walk a short distance, while his facial muscles were very much improved. The muscles of his extremities by this time showed distinct wasting and the deep reflexes had not returned. On December 4th he was discharged feeling strong and able to walk about perfectly well. In discussing these cases Dr. Stewart considered the first to be a multiple neuritis and the second an involvement of the anterior motor cells of the cord.

The third case was that of a man who has been under observation since December 1900, when he came to the hospital complaining of speechlessness which came on suddenly without warning.

There was a recurrence of attacks of a similar character every few days for a period of several weeks. Then severe headache and optic neuritis supervened and afterwards facial spasm, followed by paresis of the lower facial muscles on the right side, as well as weakness of the right half of the tongue. The mutism was no longer noticed its place being taken by a dysarthria, first of labials and later of all letters and words, and finally passing on to a complete anarthria. On opening the brain a tumor was found immediately beneath the grey matter of the lower part of the ascending frontal convolution. The removal of this was easily accomplished and was followed in the course of a few days by disappearance of the anarthria and the facio-lingual paralysis. The patient made a good recovery and was able to take part in active sports such as rowing and paddling the following summer. However in the spring of 1902 he returned, complaining of facial spasm and occasional headache and weakness. A second operation was performed and another tumor removed from the same spot. Recovery was prompt and the wound healed perfectly, all the symptoms at once disappeared. When seen at the clinic the patient appeared to be in the best of health although he was again complaining of occasional twitching of the lower part of his face. Since then, however, the tumor returned and has again been removed by Dr. Bell.

THE DIAGNOSIS OF DISEASES OF THE GALL BLADDER AND BILE DUCTS.*

By ALEXANDER McPHEDRAN, M.B.,

Professor of Medicine and Clinical Medicine, University of Toronto.

THE bile ducts are but passages for the conveyance of bile from the liver cells to be cast out into the intestines, and the gall bladder is a diverticulum that acts as a temporary reservoir to receive the excess of bile when the discharge is less rapid than the secretion, as it probably often is in sleep and rest, at which time the flow lacks the stimulus of the active movements of the diaphragm and the abdominal muscles.

The outlet of the common bile duct into the intestine is considerably narrower than the calibre of the duct, and the pressure of the bile in the ducts is very low, a very slight impediment therefore suffices to interfere with its proper discharge and cause a damming back of the bile in the bile capillaries, when it begins at once to be absorbed by the lymphatics of the liver and is discharged into the blood by way of the thoracic duct. The flow of bile may be impeded, or wholly obstructed, (1) by inflammatory swelling of the lining membrane of the ducts; (2) by gall stones, or foreign bodies in the ducts; (3) by pressure from without by tumours, glands, etc. It is from obstruction that most of the symptoms of disease of the bile passages arise.

It is further more to be noted that the bile ducts, opening as they do into the small intestine, are peculiarly exposed to infection by the micro-organisms of the intestinal tract, especially the *bacillus coli communis*. As the bile may contain bacteria excreted from the blood direct infection may also take place, as occurs, for example, in typhoid fever, but the danger is much less than that of infection from the intestine. Not only the inflammatory affections of the biliary passages, but gall-stones also are due to bacterial infection. The infection causes some catarrhal imflammation of the gall bladder. Increased secretion of mucus results and this leads to a precipitation of calcuim salts, cholesterine and bile pigment of which the stones are composed. Clumps of bacteria may constitute the nucleus of a stone. Further it is at least possible that malignant diseases are caused by infection. In the bile passages, with few, if any exceptions, the development of malignant disease is preceded by gall-stones, from which we can fairly infer that the irritation produced by gall-stones offers a favorable condition for malignant infection, if there be such, hence the much greater frequency of malignant disease of the gall-bladder than of the bile ducts.

*Read at the Canadian Medical Association Meeting at Montreal Sept. 1902.

The cardinal symptoms of disease of the bile passages are jaundice, pain, and fever.

Jaundice is the most common, as it is practically a constant symptom of the affections of the common bile duct.

As diseases of this duct always alter its calibre and therefore cause obstruction, it follows that jaundice must result. The converse is, I think, equally true, viz., that jaundice is always the consequence of obstruction of the common bile duct or its ramification in the liver. A non-obstructive jaundice is described in the books, and acute yellow atrophy among others is given as belonging to this class; but in this disease, as in others of a similar character, there is ample proof of obstruction of the bile canaliculi in the periphery of the hepatic lobules. It will certainly contribute to the definitness of the pathological concept if jaundice signifies to us absorption of bile, and that its absorption always results from its flow through the bile ducts being somewhere obstructed.

Fever is a frequent symptom in all forms of disease of the gall bladder and bile ducts. It is caused by the absorption of toxic material from the inflamed or ulcerated mucous membrane. Its severity usually accords closely with the gravity of the cause. In catarrhal jaundice the fever, if present, is slight, lasting three or four days; here the infection is mild. In marked obstruction, especially from gall stones, there may be recurrent chills with high temperature, the temperature being normal in the interval—the so-called hepatic intermittent fever. Chills and fever are more common, however, in suppurative cholangitis, which is very often associated with a history of gall-stone obstruction. It may occur also in obstruction from tumor, especially in such as rapidly growing cancer implicating the ducts. In gall-stone colic, even in the absence of suppuration, the chills and fever may recur in distinct malarial-like paroxysms of great regularity. The suppurative cases can only be differentiated by the continuous fever, deeper jaundice, tenderness in the gall bladder area, rigidity of the over lying muscles, and the graver constitutional symptoms. If a decided increase of leucocytes is found on examining the blood the existence of a suppurative condition may be rendered certain.

Pain varies according to the cause; it is the earliest and may be the most distinctive symptom. It is referred to the upper right quadrant of the abdomen. In inflammatory conditions it is of varying intensity, but usually moderate, and always continuous and associated with tenderness. That due to passage of gall stones is sudden in onset in typical cases; it may be mild, but is usually severe, so severe it may be as to kill outright. It is paroxysmal, and, as in colics generally, pressure gives

some comfort. As soon as inflammation occurs in the gall bladder or ducts tenderness over this region and spasm of the overlying muscles occur, marked in proportion to the extension of the inflammation to the peritoneal covering; then there is also continuous pain. In neurotic patients, especially females, there may be marked tenderness over the gall bladder without the existence of inflammation. It is due to hyperaesthesia; there is usually no spasm of the muscles in such cases.

I. Cholangitis and Cholecystitis.

1. (*a*) *Acute Catarrhal Cholangitis*, or Catarrhal Jaundice, occurs usually in younger persons and is generally easily diagnosed. Jaundice in a young person, coming on without pain or apparent cause, except disturbed digestion, is most probably catarrhal. Absence of pain, of emaciation, and a negative examination, usually renders the diagnosis certain. If the condition lasts more than a week or two, the possibility of grave disease, as acute yellow atrophy, should not be overlooked. The general disturbance may be so mild that faint tinging of the conjunctiva is the first thing noticed; generally, however, the jaundice is preceded by symptoms of gastro-intestinal disturbance, as anorexia, nausea, furred tongue, foul breath, constipation, malaise, headache, etc. Ordinarily the cause is soon removed and the symptoms quickly disappear, and we surmise that the condition is due to catarrhal swelling of the mucous membrane of the bile passages with consequent impediment to the flow of bile, its absorption by the hepatic lymphatics, and mild jaundice.

Sometimes the obstruction is more decided and persistent, and the symptoms may continue for weeks. In such cases the liver may become enlarged, the general health impaired, with loss of flesh and strength, and the condition assume the general appearance of serious organic disease. Such cases may assume the appearance of the early stages of acute yellow atrophy, so that in children when the jaundice does not abate within a week, and still more, if it increases, a guarded prognosis should be given.

Gall-stone jaundice is easily excluded if the symptoms are definite—by the attacks of sudden pain and increasing jaundice with each attack of pain, the jaundice remitting in the interval; the history of preceding attacks of gall-stone colic; and often the associated paroxysmal hepatic fever. But gall stones may cause little pain and tenderness and be thus indistinguishable; in such cases the jaundice is, however, catarrhal. In malignant disease, in which the jaundice is always partly due to catarrhal swelling, the loss of flesh, cachexia, ascites, tumor, and nodules in the liver serve to distinguish the more grave lesion.

In cirrhosis the slight jaundice, more advanced age, previous history, and ascites, are usually sufficient to differentiate. Hypertrophic cirrhosis is distinguished by the large liver, the ascites, the more advanced age, and the chronic course.

(b) *Chronic Catarrhal Cholangitis* is rarely a sequel of the acute affection, but usually results from the continued irritation of some persistent cause, as gall stones, carcinoma, etc., implicating the bile ducts, or by pressure from without. The mucous exudate may be so inspissated as to cause attacks of colic which may be indistinguishable from those due to gall stones. There is, however, usually little, if any, increase of jaundice in such colic, as there is in colic from gall stones in the common duct. In these chronic cases the inflammation may extend through the duct wall and affect the peritoneal covering and adhesions to surrounding structures follow. Such adhesions may give rise to severe pains resembling colic: they are usually less distinctly paroxysmal, but tend to be more continuous with exacerbations like inflammatory pains.

2. *Suppurative Cholangitis and Cholecystitis*:—This is called *Infective Cholangitis*, but the term is not well chosen, as inflammation of the tract is always infective.

The results of infection depend rather on the degree of impediment to the flow of bile than on the inherent qualities of the infecting organism. The more complete the arrest of flow the more virulent is the infection likely to become. Normal bile is sterile, and organisms are not easily grown in it, not because of its antiseptic properties, but owing to its poverty as a nutrient medium. If there is a free flow of bile the organisms have little opportunity to grow and develop malignancy, but if the flow of bile is obstructed they flourish in the exudate that takes place from the diseased passages. Probably therefore all varieties of inflammation of the gall bladder and passages are but gradations of infection by such organisms as bacillus coli communis, streptococcus, staphyllococcus, pneumococcus, and typhoid bacillus. Infection with little obstruction of bile flow usually produces catarrh; with complete stoppage, a septic cholangitis and cholecystitis, that may be so severe as to be gangrenous.

In the great majority of cases of suppurative inflammation there is a history of gall stones, and one or more of these are found impacted, or acting as "ball valves," in the ducts; other cases occur from infection by the organisms of such constitutional diseases as typhoid fever. In the mildest cases, in addition to the gall-stone colic with some intermittent jaundice, there are more or less marked chills and fever followed by

sweating. The regularity of the recurrence of chills may simulate malarial fever, but such regularity rarely lasts long.

If the obstruction is more marked, and therefore the infective organism more virulent, the symptoms become more grave. The chills, fever, and sweating are more decided, and the jaundice is more marked and persistent Unless relieved a general condition of sepsis soon develops, the patient dying in a typhoid state.

If the disease has developed in the absence of gall stones, there will be little pain, but it is rare to find none present. The liver becomes regularly enlarged and somewhat tender. On account of extension of irritation to the peritoneum there is usually tenderness below the right costal margin. If the disease follows gall-stone colic which recurs from time to time the diagnosis may be easily made ; in other cases a diagnosis is often impossible. Cases of pylephlebitis present a similar picture,and cannot be distinguished, unless a focus of infection of the portal system can be discovered. In both there is marked leucocytosis. The gall bladder is nearly always affected in cholangitis, though probably rarely secondarily to it, as the cystic duct is closed early. There is always distension of the gall bladder, and the inflammation extends to the surrounding peritoneum, hence there is always tenderness, and a pear-shaped tumor is usually palpable at the costal margin in the line from the tip of the ninth costal cartilage to a point one inch below the umbilicus. This is the usual seat of it, but not rarely it becomes much displaced especially if the gall bladder is greatly enlarged. It moves with respiration, and an incisure may be found between it and the liver. As inflammation affects the peritoneum the tenderness increases, and adhesions take place to surrounding structures so that the tumor becomes less definite, and the increasing spasm of the abdominal muscles interferes with examination. Pain is usually continuous; and fever moderate,although it may be absent. Fever is said to be more marked when there is ulceration of the mucous membrane of the gall bladder, and the pain more marked when there is no ulceration.

In the gangrenous or phlegmonous cases, as in all acute intra-abdominal diseases,the diagnosis is difficult in proportion to their severity. The more severe the symptoms the more they lose their localizing characteristics and the less likely are they to indicate even the section of the abdomen in which the disease occurs. The symptoms are those of peritonism, and are such as may arise from gangrenous inflammation of any abdominal organ, as gangrenous appendicitis for which they are most frequently mistaken. They simulate also strangulated bowel, gangrenous pancreatitis, perforation of the stomach or intestine, and acute intestinal

obstruction. A previous history of cholecystitis, of gall stones, or an infective fever, especially typhoid, indicate the gall bladder as the seat of disease and may enable us to make a diagnosis.

II. Cholelithiasis.

Gall stones are said to occur in 20 per cent of all persons over 60, but to produce symptoms in only 5 per cent of those affected. The occurrence of symptoms depends, first on the situation of the stones, and, secondly, on the condition of the wall of the gall bladder and the surrounding tissues. So long as the stones lie in the gall bladder no symptoms arise directly from them; it is only as they block the ducts that they cause disturbance. Once the wall of the gall bladder and the tissues around it become inflamed, the occurrence of symptoms may be quite independent of the presence of stones.

Of those in whose gall bladders there are stones, in a large group there are no symptoms; in a smaller group, the symptoms are mild, consisting of slight disturbances in the region of the liver and stomach, such as may arise from gastric catarrh with hyperaesthesia, floating kidney, slight adhesion of the stomach, or a neurosis. The possibility of gall stones should not be forgotten in such cases. In the third and smallest group the symptoms are severe; they may or may not be characteristic.

In a typical case, the onset is sudden, it may be with such slight prodromata as chilliness, nausea and malaise. There is usually no apparent cause for the symptoms, though there may have been some error in diet. The pain may be sudden in onset and extreme from the first, or, begin mildly, and become slowly or rapidly severe. It is felt in the right upper quadrant of the abdomen, with some extension to the left. It radiates to the back, the right shoulder, and even down the abdomen and thigh. It may be so severe as to cause collapse. Usually it is somewhat paroxysmal, and terminates abruptly. Nausea and vomiting may be marked. Such is the description given of the pains of gall-stone colic. The description may locate the pains more definitely in the right upper quadrant, but, unfortunately, in many cases it is not so typically located.

The difficulties of diagnosis are well illustrated in the following cases.

In a lady whom I saw a few days ago there was a history of attacks of colic extending with intervals over 8 years. In the earlier years she said the pain always began in the lower zone of the abdomen, and gall stones were not suspected as the cause; in recent attacks the pain was rather diffuse, in the area between the ensiform cartilage and the

umbilicus. Her gall bladder now formed a freely movable pyriform tumor extending nearly to the umbilicus. There was persistant vomiting and marked prostration. There was no fever, yet leucocytosis was so decided that empyema of the gall bladder had doubtless occurred in this attack. Her general health was such as not to permit of operation, and she died two days later.

In another case, a lady of rather neurotic temperament, the pain begins at the costal margin, just at the ninth cartilage, but is greatest to the right of the spine between the eighth and twelfth ribs where there is much tenderness of the muscles with radiation of pressure-pain to the front, to the gall bladder region, if the pressure is made over the eighth or ninth ribs, and the appendix region if over the eleventh and twelfth ribs. There is marked tenderness in the region of the gall bladder, but no spasm of the overlying muscles. The tenderness is evidently due to hyperaesthesia and not to inflammation. The recurrences of pain are irregular, sudden in onset and cease suddenly, bear no apparent relationship to food, and are often accompanied by vomiting. There are no symptoms of gastric ulcer, or history to indicate perigastric adhesions. The gall bladder cannot be made out with certainty. The right kidney is slightly prolapsed so that the lower portion of it can be palpated. In such a case only a probable, or even a possible diagnosis of gall stones can be given. Some years ago Boas drew attention to tenderness to the right of the 12th dorsal vertebra as a sign of gall stones. The tenderness may persist long after the attack has subsided. In the foregoing case tenderness is more diffused and is nearly as marked on the opposite side.

Jaundice is usually said to occur in one-half the cases of gall stones, that is, we are to infer that in half the cases the stone passes into the common duct. My own experience places it much below that. Stones in the gall bladder and cystic duct cause no jaundice unless from extension of catarrhal inflammation to the common duct. It is probable that in considerably less than one-half the cases with a history of gall stones do any stones pass through the cystic into the common duct, so that in only a minority of cases will gall stones interefere with the flow of bile from the liver; it is only in the "successful" not in the "unsuccessful" attacks that jaundice occurs, (Riedal). If the stone does gain access to the common duct jaundice follows the attack of colic in one or more days after its escape from the cystic duct. Its amount and duration will depend on the degree and duration of the obstruction. As soon as the stone passes into the intestine and the obstruction is removed the bile flows freely again and the jaundice rapidly disappears. The stone

however may become impacted in the duct, or lodged in the ampulla just above its outlet. The obstruction will cause dilatation of the duct with distension especially around the stone; this allows the stone to float backwards and bile escapes, and the jaundice lessens until the stone again blocks the passage. The process is repeated and continues so long as the "ball-valve" action of the stone continues. With these recurrences of obstruction there may be repetitions of chill and fever. This variation in the jaundice is almost pathognomonic of gall stone obstruction, as jaundice, from other forms of obstructions usually remains unabated while the obstruction lasts Gall-stone obstruction rarely gives rise to unvarying persistent jaundice unless the stone is lodged at the outlet of the duct into the intestine, a rare event. In gall-stone jaundice the liver is rarely much, if at all, enlarged, and the enlargement is much slower than in jaundice from carcinoma.

Fever of the intermittent hepatic type is not uncommon in the cholangitis associated with gall stones, and is of serious import in proportion to its severity and continuance. If with it, tenderness in the gall bladder area with spasm of overlying muscles, the development of a tumor in this region, and rapid increase in leucocytosis occur, there is little doubt of pus formation in connection with the gall-stone obstruction.

Tumor as a result of gall-stone obstruction is not common because of the inflammatory thickening of the wall of the gall bladder which usually precedes and accompanies the formation of the stone. If the changes in the gall bladder are but slight a plug in the cystic duct may cause great distension of it by mucoid fluid secreted from its wall. It forms a smooth pyriform tumor with its large end towards the umbilicus, freely movable at its lower end and fixed to the liver above and moving with it. If not too much distended and a number of stones are present, and if the abdominal wall is thin and relaxed, crepitus is sometimes obtained on manipulating the tumor. There are, however, a good many "ifs" to be provided for before this sign is obtainable. Such a tumor has to be differentiated from tumor of the pylorus, and of the head of the pancreas. If it is large and dislocated it may be difficult to distinguish from floating kidney, or from a cyst of the ovary.

Gall stones may be diagnosed with certainty in the following conditions:

(1) Recurrent attacks of colic at the right costal margin with or without jaundice, with nausea and vomiting, and tenderness in the gall bladder region. A history of such attacks especially at long intervals renders the diagnosis certain.

(2) Recurrence of jaundice of short duration ; of long duration if preceded by colic. In such conditions the jaundice is usually variable. Previous attacks of jaundice with gall stones in the fæces are of course conclusive.

(3) Attacks of colic followed by jaundice a few days later.

Several conditions produce symptoms similar to those of gall stones. In many cases of gastralgia the pain is sudden in onset and severe and is occasionally accompanied by nausea and vomiting. Such attacks may be due to a variety of causes, such as gastric or duodenal ulcer, hyperacidity in cases of gastric hyperaesthesia, and adhesions of the stomach to the gall bladder or bile ducts. In the last class with the attacks there may be jaundice, and thus simulate a gall-stone attack very completely. A history of gastric ulceration or of gall stones would be of great value in such circumstances. The attacks in such perigastric adhesions usually persist longer than gall-stone colic, and recur for years without material injury to health. They usually resemble gastric ulceration with hyperacidity more than gall-stone colic. The pain of neurosis, especially in neurotic women, may give much difficulty. The second case already described is one in point. In that women there is the pain of neurosis, but that there is not also pain from all gall-stone irritation of the cystic duct is quite uncertain. The gastric crises of tabes dorsalis may cause difficulty, especially if they occur before the other symptoms become manifest.

By way of conclusion I may say that in typical cases of gall stones, as of all diseases of the gall bladder and bile ducts, the diagnosis may be present no difficulty, but in the atypical—and they form the great majority—more than a probable diagnosis is impossible. Inflammation may simulate stone ; and stone, inflammation. Tumor may simulate both. One often masks the characters of the others.

A positive diagnosis being impossible, it only remains to be armed with a full appreciation of the difficulties to be met and of the conditions that may lead astray.

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THE MEDICAL TREATMENT OF DISEASES OF THE BILIARY PASSAGES AND GALL BLADDER.

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I HAVE been requested to say a few words to open that part of this discussion dealing with the medical treatment of diseases of the biliary passages and the gall bladder. Diffuse suppurative inflammations and stenosis, and obstruction of any one of the ducts of a mechanical character, are admitted by all to demand immediate surgical intervention and, therefore, call for no remarks from me this morning. My observations will be limited to the treatment of the so-called catarrhal inflammations of the bile passages and gall bladder, and to the prophylaxis and early medical treatment of cholelithiasis.

Until recently, the treatment of these affections has confessedly been very empirical, and the results obtained have been uncertain and disappointing. Many advances, however, have been made, during the past few years, in our knowledge both of the physiology and the pathology of these organs. Recent carefully conducted experimental investigations carried out in animals with artificial, and in men with accidental biliary fistulæ, have enabled us to appreciate the various influences which modify and alter the secretion of bile, and interfere with its passage from the liver cell through the minuter bile ducts to its exit into the intestinal tract. By this same method of investigation also we have been enabled to clear away much of the ignorance and confusion which has existed in reference to the action of drugs on this secretion. These advances in our knowledge may assist us in prescribing a more rational, and, therefore, more successful therapeusis.

Rational therapeutics must always be based upon a knowledge, as exact as possible, of the underlying pathology. Pathologists, however, have as yet spoken in a very hesitating way as to the morbid conditions present in jaundice not due to a demonstrable obstruction. The opinions of Hunter (1) carry much weight, although as yet post-mortem evidence of catarrhal inflammation of the ducts is very scanty. Our present views may be epitomized as follows:—The liver, situated as it is on the most important vessel of the portal circulation, besides performing its important offices in regard to metabolism, acts as an important excretory organ much in the same way as the kidneys do in the general circulation; and in doing so it protects the system against the entrance of toxic drugs and the crude and irritating products of faulty digestion. The products of

normal digestion carried to the liver and excreted in the bile are non-irritant. It is otherwise in certain disorders of the gastro-intestinal tract associated with the formation of irritating toxines, which toxines, when absorbed into the portal system, are arrested and excreted by the liver cells into the bile, altering its non-irritant character. If this bile were poured directly into the intestines, little or no disturbance might arise, but, instead of this, it is passed at a very low pressure along a system of minute canals lined with epithelium, which is itself excretory. This epithelium under normal conditions appears to secrete a considerable quantity of watery fluid into the bile, rendering its consistence thin and its flow easy. Under the influence, however, of irritating properties in the bile the secretion of this lining epithelium is increased in quantity, and becomes mucous and viscid in character, thus checking the onward flow of the bile, and in the more severe cases, producing such a rise of pressure in the ducts as to lead to some re-absorption by the lymphatics.

The results obtained by Stadelmann (2) in his experiments with toluyl endiamin afford us a curious illustration of this condition in an extreme degree. When this drug was administered to dogs, it promptly produced an attack of jaundice, which could be attributed only to the marked increase in the viscidity of the bile, resulting not from changes in the bile as secreted by the liver cells, but from a greatly increased secretion of mucus by the walls of the bile ducts. This increase of viscidity, associated with an inflammatory swelling of the epithelial lining of the ducts, brought about a stasis in the bile current leading to re-absorption of the bile through the lymphatics into the general circulation, and thus gave rise to these symptoms of icterus. The jaundice in this case had nothing to do with the duodenum, for it occurred even when the common bile duct had been ligatured and a biliary fistula established.

Fortunately few toxines or drugs possess properties so irritating to the mucous membrane of the bile ducts as this toluyl endiamin, but Hunter (3) considers the icterus of epidemic jaundice, of febrile jaundice, of the jaundice of Weil's disease, of acute yellow atrophy, of the various specific fevers, such as yellow, relapsing, and malarial, and of pyæmia, to to be of a similar nature.

He is also of the opinion that some retardation of the flow of the bile, associated with a slight degree of catarrh of the bile ducts, frequently underlies the ailments included under the terms lithæmia, and popularly attributed to "biliousness" and a "torpid liver"—ailments not infrequently accompanied by more or less tinging of the conjunctiva.

It is easy, on this supposition, to understand the good results often resulting from the employment of the so-called hepatic stimulants, such as mercury, podophyllin, and rhubarb, which, as we now know, have little direct action on the liver cells, but a very distinct action on the gastro-intestinal mucosa.

Closely associated with any retardation in the on-flow of the bile in the ducts is another important factor in the production of disease in these passages, namely, the infection of the bile by micro-organisms. In health the bile is sterile. Attempts to prove that it is not so have not been confirmed, though the old idea that it possesses marked antiseptic properties has been overthrown, and investigators have shown that many forms of micro organisms may grow luxuriantly in it under certain conditions.

Infection by bacteria may take place in two ways. We may have an ascending infection through the biliary passage from the duodenum. In this case an infection is possible from either the bacillus coli or the streptococcus, as these bacteria are frequently present both in the duodenum and in the lower end of the ductus choledochus. We may also have an infection through the portal circulation; bacteria absorbed from the intestine may pass in the blood through the portal vein, be eliminated by the liver, and pass into the bile. Fütterer (4) has demonstrated that typhoid bacilli may readily pass in this way into the gall bladder. Fraenkel and Krause (5) have shown that the bile is a much frequented habitat of the typhoid bacillus and cultures, made from bile in the gall bladder in 30 autopsies of patients dying of typhoid fever, showed the bacillus typhosus in 21. Chiari (6) found the typhoid bacillus in 19 out of 22 cases of typhoid fever, and Osler (7) states that Flexner found them in 7 out of 14 cases, but in no case was there any clinical or pathological evidence of an inflammatory reaction in the gall bladder. To permit an active infection, some stagnation in the bile current appears to be necessary.

Naunyn's experiments demonstrated that only after ligature of the common duct will an injection into the hepatic duct of a culture of the bacillus coli be followed by inflammation. Peterson, (8) referring to cases of cholelithiasis occurring in Czerny's Klinik, says, "after the operation the bile which escaped in the fistulous opening was examined from time to time, and it was found that the bacteria diminished rapidly as the bile continued to flow, and were often found to have disappeared at the end of eight days, almost always after three to four weeks" In one experiment Cushing (9) found that the typhoid bacilli, introduced directly into the gall bladder of the dog, disappeared in 24 hours with the free

flow of bile. Many other experiments that I could mention indicate conclusively that, without stagnation in the onflow of the bile, an active infection does not take place.

Still further, a retardation in the onflow of the bile, associated with a catarrhal condition of the bile ducts, and a consequent increased secretion of mucus and exfoliation of epithelial cells, undoubtedly plays a very important, if not the most important, part in the formation of gall stones. The majority of gall stones, as we know, are formed chiefly of cholesterin, having a nucleus either of clumped bacteria, or of bilirubin calcium. Cholesterin has been regarded as a normal constituent of bile, in which it is held in solution by the bile salts and by the small quantity of fats and soap present in bile, but it appears to be very doubtful whether it is actually formed in the liver cells. Experiments carried out in Naunyn's laboratory would indicate that there is no separation whatever of cholesterin from the blood by the liver cell, and that the amount found in the bile is in no way dependent upon the quantity or character of the food taken. Naunyn (10) considers that only a very small amount, if any, of the cholesterin in the bile is formed by the liver cells, but that a much larger amount is derived from the epithelium of the biliary passages and is a product of the disintegration of their protoplasm. He adds that whatever view may be taken of the source of the cholesterin of the bile in health, there can be little doubt that the biliary passages are its source in disease. What, then, are the conditions leading to its formation in increased quantities and to its precipitation? Statistics show that gall stones are extremely uncommon in young persons under 30, and are most frequently met with over 60. They are three to four times more common in women than in men; they are also much more frequent in those who suffer from conditions favouring retardation of the bile current. Such conditions exist in those who lead an inactive life, in persons suffering from mitral stenosis, and in those in whom the movements of the abdominal and respiratory muscles are hampered by tight lacing, obesity, pregnancy, or abdominal tumor. Stasis in the onflow of bile in the ducts, therefore, appears to be an important etiological factor in the formation of gall stones. How does this stasis lead to cholelithiasis? Frerichs taught that under conditions of stasis changes took place in the bile, its reaction became acid, the bile salts were decomposed, and the cholesterin was precipitated. Naunyn, (11) however, questions this explanation, and, as the result of his investigations, regards the infection of the bile by micro-organisms as the efficient cause of the increased secretion from the epithelium of the bile passages. When stagnation occurs from any cause, a bacterial infection is favoured. Should

such infection take place, a catarrhal cholangitis and cholecystitis are set up; cholesterin is formed in an abnormal amount, which is afterwards readily deposited on any suitable nucleus, either a minute bilirubin calcium calculus, or a clump of typhoid or colon bacilli. Still it is to be remembered that stasis is the important underlying factor permitting such infection, for with a free flow of bile we know that bacterial infection tends to disappear rapidly.

Stasis is also an important factor in the formation of the bilirubin calculi. Pure bilirubin is never precipitated (Hunter), but under certain conditions it combines with calcium and is then precipitated as an insoluble compound constituting the gritty particles sometimes met with in the intra-hepatic ducts, which may grow to form small calculi, or may form the nucleus of a cholesterin gall stone. Bilirubin and calcium are both normal constituents of the bile, but under ordinary circumstances never combine to form this insoluble compound, even when lime is added directly to the bile in considerable excess; the combination being prevented by the presence of the bile salts. Naunyn found, however, that the addition of a small amount of egg albumin to the bile at once brought about a precipitation of this insoluble salt. He, therefore, considers it highly probable that the albuminous material derived from the desquamation and disintegration of the epithelium of the bile passages in catarrhal conditions is the chief determining cause of the precipitation of these small concretions. This catarrhal condition is dependent to a great extent on stasis in the bile current, associated with either a bacterial infection or the excretion of irritating toxines in the bile, so that again we have stasis as the important etiological factor to be considered in our therapeusis.

Recognizing, therefore, the importance, in the etiology of the diseases which we are now considering, of any retardation in the on-flow of the bile in its ducts, let us briefly enquire into the means at our disposal for modifying the amount and character of this secretion, and for favouring its passage through the small ducts till its exit into the intestine.

Placed, as the liver is, upon an efferent vessel of the alimentary canal, its vascular condition must vary with the varying conditions of the gastro-intestinal tract. The mere taking of food in itself produces an increased secretion, which becomes marked within an hour and greatly increased after four or five hours have elapsed. Heidenhain (11) has also shown that in dogs, section of the splanchnic nerve, by producing a general dilatation of the portal vessels, causes a marked increase in the flow of bile, while stimulation of that nerve, by inducing a contraction of the same vessels, diminishes the secretion of bile.

Our knowledge is still defective as to the exact influence on this secretion of the various constituents of the food. Fats appear to have a marked effect in increasing the amount of bile secreted and also the amount of fat excreted in the bile. Rosenberg (12) has shown that the influence of the fats in stimulating the secretion of bile is much more distinct than that of either proteids or carbohydrates. Barbara (13) in a recent paper has stated that the excretion of bile, after a meal of proteids or carbohydrates, runs parallel with the excretion of urea, while after a meal of fats, bile secretion increases out of proportion to the urea ; and Albu (14) says that in a woman with biliary fistula he found that a diet consisting of eggs, soups, white meat, vegetables, and fruit, caused a more abundant outflow than one in which meat figured largely.

The secretion of bile is also influenced by the amount of fluid taken, but there is no mechanical filtration such as exists in the kidneys, as the bile is excreted at a pressure several times higher than in the portal vein. The amount of water excreted is, therefore, dependent on the activity of the liver cells and not on the water in the blood. At the same time, it has been observed that in the case of a woman with a biliary fistula, the amount of bile excreted was greater upon the days on which a large amount of fluid was taken, and that this increase was in the quantity of the water and not of the biliary salts.

The determination of the influence of drugs on the biliary secretion has been beset with many difficulties; and even in the case of the few which apparently stimulate this secretion, it is difficult to be sure of the exact part played by the liver cell itself and by the expelling apparatus, and of the effect produced by the action of tissues outside the liver, such as the intestinal glands and mucosa. Careful experiments, however, have been recently made in cases of accidental biliary fistulæ, and the effect of drugs carefully observed.

The more important drugs which have been found to increase the flow of bile are : turpentine, salol, sodium salicylate, sodium benzoate, and euonymin, but no drugs stimulate the flow so powerfully as do the bile salts, the glycocholate and taurocholate of soda. The action of sodium bicarbonate, sodium chloride, sodium sulphate, Karlsbad salts, aloes, rhubarb, and ipecac, is so slight as almost to amount to nil ; while calomel, strychnine, and potassium iodide rather diminish the flow.

A recent investigator has questioned the existence of any drugs directly influencing biliary secretion. But this, I think, is carrying scepticism too far ; we know that the bile salts will stimulate the flow ; similarly, but to a less extent, that sodium salicylate will increase the flow, and Rosenberg claims a direct cholagogic action for olive oil, which, in his

hands, next to the bile salts, was the most efficient stimulant of the biliary secretion.

It is also to be noted that not only is the onflow of the bile in its passages influenced by the activity and the character of the secretion, but also by the vigour of the peristaltic action of the muscular coat of the ducts, and by the pressure made directly on the liver and gall bladder by the movements of adjacent organs, notably by the excursions of the diaphragm and by the contraction of many of the abdominal muscles. Experiments have demonstrated that the flow of the bile is much accelerated by vigorous and deep respiratory movements, a very marked increase in the amount of bile poured out takes place after waking and rising in the morning.

Having thus, very imperfectly I feel, reviewed the pathological and physiological facts with which we have to deal, let me briefly suggest a few broad lines of treatment.

In all affections of the biliary passages, it is of the first importance that the blood carried to the liver cells by the portal vein should contain no irritating drug or toxin which, after its secretion in the bile, may have a tendency to maintain or increase irritation of the mucous lining of the ducts. To this end the dietary must be supervised and made to conform to the digestive capacities of the patient. No hard and fast lines can be laid down, but each individual must be carefully considered as regards his habit of body, his capacity for the digestion of the different articles of food, the amount of exercise he is able to take, and the nature of his work. An all important point is that the diet list should be a simple one ; simplicity means facility of digestion. It is of the utmost importance to secure and maintain a healthy condition of the gastro-intestinal mucous membrane. To this end the occasional employment of a gastro-intestinal alterative and laxative, such as mercury, euonymin, podophyllin, or rhubarb, followed by an alkaline mineral water, will, I think, be of much service. For many reasons constipation should not be permitted. In Europe the waters of Sprudel Springs in Karlsbad are highly esteemed. They are alkaline, laxative, and have a tempature of 110-115° F At the same time it appears to me desirable that except in conditions of actual blocking of the ducts, the free secretion of a normal watery bile is to be encouraged. To favour this, the meals should be regular, and at not too long intervals, and the daily dietary should contain as large an amount of fat as can be taken without disturbing digestion. Fat, more than any other element of the diet, stimulates the secretion of the bile, while at the same time acts as an efficient intestinal antiseptic. The free use of a pure water between meals should also be encouraged. The great majority of persons, suffering from affections of the biliary

passages, will be found to take an insufficient amount of water to drink. Luff (15) states that this insufficient consumption of fluid is especially frequent in women, and attributes the fact to the erroneous and absurd belief that a diminution in the amount of fluid taken tends to keep down the body weight and to prevent the occurrence of obesity. In the prevention as well as the treatment of these disorders, the free consumption of water, apart from the meals, is most desirable.

It is also of importance to develop and maintain a free and full action of the diaphragm and the associated abdominal muscles. All forms of clothing which tend to impede the action of these muscles or unduly press upon and tilt downwards the fundus of the gall bladder, must be discarded, and regular systematic exercises, involving these muscles chiefly, should be taken.

And lastly, the question arises, what can we effect by the administration of drugs? No drug that we know of has so powerful a stimulant action on the liver cell as its own bile salts, the glyco-cholate and taurocholate of soda, and in suitable cases, where the passages are not absolutely blocked, these may be administered in the form of ox-gall. The objection to the use of this drug, however, is that it contains not only the bile salts but the bile pigment, and in those cases where the system is already suffering from more or less re-absorption of these pigments, it is inadvisable to burden it still further by the exhibition of ox-gall. And here let me say that a sharp distinction must be made between these two constituents of the bile. Bile pigments are entirely of an excretory character. They are waste material, and according to Bouchard, they are toxic, and are not intended for re-absorption. It is quite different with the bile salts, of which four-fifths of the amount secreted by the liver cells are re-absorbed into the circulation and appear to subserve a useful purpose in the economy. Some purer preparation, therefore, of cholalic acid than ox-gall would appear to be a desirable addition to our materia medica.

In the slighter catarrhal conditions, sodium salicylate and sodium benzoate both appear to be capable of rendering us some assistance, and as they are excreted in the bile, will doubtless assist in maintaining its sterility. They should be employed in doses of from 60 to 80 grains daily.

In the treatment of cholelithiasis, although the administration of olive oil has by no means fulfilled the expectations of those who first recommended it, yet I still think that in certain conditions, it will afford us distinct assistance. The large doses originally recommended in the treatment of cholelithiasis are apt to disturb, and may in that way do harm, but in gradually increasing doses from 2 to 6 ounces per diem, it

will stimulate the secretion of bile, rendering it more fluid, and by increasing the amount of fat excreted in the bile, will increase considerably its power of holding the cholesterin in solution.

During the actual attack, sedative and anodyne measures are called for. We have no anodyne so effectual as the hypodermatic employment of morphine, or of morphine and atropine, and the application of local heat. At the same time, the free employment of an alkaline mineral water, such as Vichy, is to be commended, and this, I think, has a distinctly better effect if drunk as warm as may be convenient.

When the acuteness of the attack has passed, what measures are to be adopted? Are we, as physicians, at once to recommend operation? I think not. Naunyn (16) says cholelithiasis is a disease which becomes dangerous through cholecystitis and cholangitis and their consequences, through chronic icterus, and through carcinoma. Kehr (17) states, of a probable 2,000,000 Germans who have gall stones, only 100,000 complain of their trouble; with the remainder, the disease is in a latent condition; and again, "Latent cholelithiasis is now to be regarded on the whole as a rather harmless affection." The great success which often attends a "Karlsbad cure" is attested by all, and to those who can afford the time and the money I should be inclined to give the option "of the regular life, the beneficial, pain-assuaging, laxative action of the Karlsbad Springs, the delightful influence of the Sprudel baths, with their peat poultices to the liver and region of the gall bladder. There the beautiful surroundings entice the cure-guest into the noble forest; he climbs the mountains, which in stillness leave nothing to be wished for, and he forgets the worry of his business and the pain of his disease. The cuisine permitted by the cure removes the sins of his club-life at home, and of the many strawberry and peach punches; whoever is not very sick must in a short time feel himself well." Such may well be the treatment of cholelithiasis for the prosperous classes.

In cases, however, of repeated unsuccessful attacks, as Riedel calls attacks without the passage of stones, and in cases of prolonged impaction, unquestionably an operation by the surgeon is demanded. But even after the operation, the careful dietary, the free use of water, and a regular amount of daily exercise, are demanded to maintain freedom in the future from recurrence. The surgeon no more than the physician can promise an absolute cure.

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ROBERT BURNS' LAST ILLNESS.

EARLY in the month of January, 1796, when his health was in the course of improvement, Burns suffered a severe chill. Following this he had an attack of rheumatic fever. On 31st January he wrote to Mrs. Dunlop that "I became myself the victim of a severe rheumatic fever and long the die spun doubtful; until, after many weeks of a sick-bed, it seems to have turned up life, and I am beginning to crawl across my room, and once indeed have been before my own door in the street." As from time to time he appeared on the street during the early months of 1796, his old acquaintances were struck by the appearance of Burns, whom a second look showed to be dying. April and May brought little improvement, as he spent his time in his room, often confined to bed. On July 4th, he went to Brow on the Solway shore to try sea-bathing. He wrote Mrs. Johnston. "This protracting, slow-consuming illness will, I doubt much, my very dear friend, arrest my sun before he has reached his middle career." On the 14th July, he said to Miss Craig, whose home he visited, and who offered to shut the window blinds, thinking the sunlight might be too much for Burns, "Thank you, my dear, for your kind attention; but oh! let him shine; he will not shine long for me." He returned home on 18th July. During the next four days his mind wandered a great deal; and when not roused by conversation there was delirium. The end came, July 21st, while he was pillowed up in bed in the semi-erect position. Here there is the picture of a man dying of gradual heart failure, as the result of his rheumatism.

NOTES ON MASTOID OPERATIONS.*

By A. B. OSBORNE, M. D.,
Oculist and Aurist, Hamilton City Hospital.

THE following six successive cases of radical operations upon the mastoid, done during the months of April, May, and June of this year, are cited to show the varying symptoms existing before the operation and the different conditions found at the time of operation. The operation is now so familiar that no reference to it is necessary. I would simply state that these operations were done with mallet, chisels, and gouges.

1. C—— M——. Age 3. Symptoms before operation. Swelling and tenderness over the right mastoid, restlessness and fever, no discharge from the ear, drumhead normal.

Operation. 15th April, 1902. Pus was found beneath the periosteum and upon opening the bone the antrum was found full of pus, which also extended to some of the adjacent air cells, but did not involve the attic. Complete removal of the diseased parts resulted in recovery with perfect hearing.

2. N.——S——. Age 13. Symptoms before operation. Persistent offensive discharge from right ear, fever more marked at night, tenderness over mastoid. Old cicatrix over mastoid from previous operation, drumhead entirely destroyed.

Operation. 2nd May. Antrum and many air cells filled with pus. In attempting a thorough removal of all the diseased bone, the facial nerve was accidently divided, leaving permanent facial paralysis on the right side.

3. Miss M——. Age 22. Symptoms before operation. Chronic offensive discharge from the left ear, drumhead almost entirely absent, swelling and tenderness over mastoid, the swelling extending some distance back, intermittent fever.

Operation. 18th May. The area involved was so great that an incision two inches long was made at right angles to the original one. The attic, antrum, and many large cells were found full of pus; the roof of the attic was eroded through, exposing the dura, covered with granulation tissue, the lateral sinus was also widely exposed; pus had extended behind the antrum, between the diploe of the skull, for the distance of an inch, where the inner plate was extensively eroded and a large abscess existed lying upon the dura which was covered with granulations. The outer plate was so eaten away that when the periosteum was removed a blunt probe readily perforated the bone.

* Read at the Canadian Medical Association, 17th September.

4. L——S——. Age 16. Symptoms before operation. Chronic discharge from left ear, tenderness over the mastoid, large perforation of the drumhead, occasional high fever, acute pain radiating from the mastoid.

Operation. 30th May. Large bone abscess extending to the dura of the middle fossa and the lateral sinus, extending also to the tip of the mastoid.

5. Mrs. C——. Age 47. Symptoms before operation. Chronic discharge from left ear, slight swelling over the mastoid, with tenderness, drumhead almost entirely absent, giddiness and excruciating pain radiating from the mastoid.

Operation. June 14th. Extensive bone abscess, the contents of which, when opened into with the chisel, almost spurted out. The bone was eroded exposing the dura of the middle fossa and also exposing the lateral sinus. The pain ceased immediately after the operation.

6. Mrs. G——. Age 36. Chronic offensive discharge from right ear, prolonged treatment has had no effect; slight tenderness over the mastoid. The discharge has been accompanied by blood lately which has prompted her to undergo the operation.

Operation. July 21st. After chiselling a short distance there was considerable oozing of blood from the bone opening. This oozing occurred several times until the bone opening was sufficiently large to remove a sequestrum about the size of a bean. The surface of the sequestrum had sharp jagged points and it was in immediate contact with the lateral sinus. The source of the hemorrhage, both before and during the operation, must have been the lateral sinus caused by the sequestrum, as all hemorrhage ceased with its removal.

In the first of this series there was a mastoid abscess without involvment of the middle ear. The small bones and the drumhead were left intact and recovery took place with unimpaired hearing. In the second case I had the misfortune—the only time in my operating experience—to divide the facial nerve. In extenuation I may say that most of the landmarks had been obliterated by a previous unsuccessful operator.

In the third case, in addition to the mastoid abscess, there was a large extra dural abscess about 1½ inch obliquely upward and backward from the external auditory canal. The dura was covered with unhealthy granulations, and the bone over the abscess was so diseased that a dull probe easily penetrated it. The passage connecting the abscesses was very small and difficult to trace.

In the fourth and fifth cases, there was exquisite pain. In each of these cases, when the chisel penetrated the pus cavity, the pus almost

squirted out, showing that it had been retained under pressure. In each, the pain was immediately relieved by the operation.

The sixth case came for operation because of occasional oozing of blood from the ear in addition to perulent discharge. The rough points of the sequestrum, being in direct contact with the lateral sinus, appeared to have been the cause of the hemorrhage.

In each of these cases, except the first, the lateral sinus was laid bare. In the third, fourth, and fifth the dura was laid bare.

It would appear that suppurative disease extends more readily through the bone of the skull than through the dura, and the protection of the brain, from infective processes, depends much more upon the thick, tough, fibrous dura than upon the bone.

In my experience, it is of the greatest importance that the operator should dress all mastoid operations personally until the healing is completed.

In closing, I will refer to two cases having many if not all the symptoms of deep seated mastoid disease, but which upon operation proved to be entirely superficial. The first, a child aged 6, had a purulent offensive discharge from the right ear, the auditory canal so swelled that the drumhead could not be seen, swelling with pain on pressure over the mastoid, constant fever worse at night, occasional delirium. When examined upon the operating table, an abscess was found pointing upon the posterior wall of the auditory canal, and, upon a free incision being made at this point, a large quantity of pus escaped and the boy made a rapid recovery. Later examination showed the drumhead to be normal.

The second case, a trained nurse, came to me because of a chronic discharge from the left ear; the external auditory canal was so swollen and tender that the drumhead could not be seen. There was œdema and tenderness over the mastoid, together with some fever. Upon making an incision for a mastoid operation, an abscess was found about an inch in length lying external to the periosteum and communicating with the auditory canal. To make sure that there was no deeper disease, the periosteum was raised and the bone found perfectly healthy. The abscess healed kindly and the drumhead when seen subsequently was found to be normal.

Each of the radical mastoid operations made an uninterrupted recovery with complete relief of all symptoms.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

FATAL ACETONAEMIA FOLLOWING AN OPERATION FOR ACUTE APPENDICITIS.

IN the "Annals of Surgery" for October, a paper is reproduced, read before the American Surgical Association in June, by Dr. Brewer of New York in which an account is given of a case of acetonaemia following an operation for appendicitis.

The patient was a boy aged 12, history negative, previous health good; operation about the sixth day of the attack, a perforated gangrenous appendix was removed under chloroform anaesthesia lasting 25 minutes. The progress of the case was satisfactory and all indications good until the third night, when he awoke with a piercing shriek, and continued screaming for a few seconds, failing to recognize those about him; then fell asleep till morning when he was distinctly somnolent, but when aroused would cry out as if frightened. The general condition was good, though the urine showed traces of albumen, and granular and hyaline casts. The paroxysms continued throughout the day with intervening deep sleep. There were no signs of cranial palsy or meningeal irritation, and no bodily disturbance. About this time the sweetish odor of the breath gave the first clue to the condition and on analysis large quantities of acetone and diacetic acid were found in the urine and blood. Believing that the symptoms were due to an acute auto-intoxication, diuresis, catharsis and intravenouous injection of a solution of bicarbonate of soda were resorted to but without avail, the periods of excitement became infrequent, the sleep more profound, and the patient died the next morning.

In seeking an explanation, sepsis, traumatism, drug intoxication can all be excluded; auto-intoxication is the only tenable explanation and of this, ptomainic poisoning and uraemia, may be excluded by the history and conditions, acetonaemia remains. The term is misleading as acetone itself is harmless while later investigation throws doubt on the theory which gave "acidosis," from accompanying "oxybutyric" and "diacetic" acids as the cause of a direct toxaemia. The presence of these acids reduces the alkalinity of the blood, on which depends its power of absorbing carbon-dioxide, and hence we have a poisoning by carbon dioxide.

The characteristic symptoms are three: a sweetish, ethereal odor of the breath, delirium, and a rapidly fatal coma. Though usually associated with diabetes it may occur independently of it in a variety of conditions *e. g* infectious fevers, in brain lesions, in carbo-hydrate starvation, and following anaesthesia from ether or chloroform. The author found acetone in pathological amount in the urine of seven out of thirty-three cases of anaesthesia, but in only one was it accompanied by symptoms of intoxication. The subject offers a fruitful field for further investigation.

PRIMITIVE, PREHISTORIC TREPHINING.

The 'Medical Press' of Aug. 20th, has a special article of great interest on this subject. An important contribution has recently been made by Rev. J. A. Crump in the 'Journal of the Anthropological Institute' dealing with the trephining practices of the inhabitant of the South Sea Islands. The evidence from skulls found, shows that in the 'polished stone' age the operation was occasionally performed, and among the primitive islanders it was done by scraping with a piece of flint or broken glass when that could be procured. It has been suggested that the object in view was to release the evil spirit which possessed the sufferer from epilepsy, ante-mortem operations seem to have been performed in most cases on patients early in life, and it is found too that post-mortem operations have been done on those who have submitted in early life to the trephining. The explanation of this is that these persons had been regarded as of sacred personality and after death fragments of the skull were in demand as armlets or charms. Peculiarly enough, where this had been done, attemps had been made to complete the form of the cranium by pieces from other skulls, an argument, to Mr. Broca, that, believing in a life after death, the natives wished that those from whom the armlet material had been taken should not lack the full cranial equipment.

Specimens of trephined skulls have been found in all the pre-historic ossariums that are scattered over Europe—some indeed, with the seat of operation over the motor area, while in Yucay, Peru, specimens are found that antedate the European period, and in the valley of the great lakes, especially in Michigan, many specimens are found in the mounds. In New Britain, according to Mr. Crump, the operation is frequently done for fracture which results from blows with the sling-stone or stone club, with a great measure of success, and few deaths from secondary processes. The instrument used is a piece of shell or flake of 'obsidian'—a kind of natural, volcanic glass, and the operator is the 'wizard' of the

district. In New Ireland, the operation is performed for epilepsy, and for severe, throbbing headache, and the writer has in his possession one skull which has been trephined five times. The cures are many and the operation quite popular. The 'Kabyles' of Northern Africa also perform the operation as a purely surgical measure, but are the only race there, who do so. Altogether in surgery, there would seem to be 'nothing new under the sun.'

OLEATE OF ZINC. DRAWBACKS OF THE B. P. PREPARATION.

IN the *Medical Times and Hospital Gazette*, Oct. 14th. Eddowes calls attention to the drawbacks of the B. P. preparation of oleate of zinc, pointing out that it becomes rough, rancid and hence acid and that it cannot be evenly spread out or applied. On the other hand, the olea palmitate of zinc, as prepared by Parke, Davis and Co., does not become rancid, can be dusted evenly on the skin and is almost imperceptible on smooth surfaces, while it imparts just the waxy or greasy effect which is needed to protect the epidermis from moisture and hence is well suited for the treatment of "occupation" eczema where the indication is to protect from moisture where the patient has frequently to wet the hands.

OVARIOTOMY FOR INOPERABLE MAMMARY CANCER.

IN *The Lancet* Oct. 4th, D'Arcy Power reports three cases of inoperable mammary cancer in which recourse was had to ovariotomy in the hope of relieving the symptoms.

In one case, a woman aged 42, suffering from a large tumor of the right breast with involvement of the skin, glands and left breast, ovariotomy was performed on April 24th. The patient showed marked improvement, including in the decrease in the size of the tumor and of the affected axillary glands, with increase in weight. This improvement was kept up at the time of reporting the case in September.

Two other cases aged respectively 52 and 55 were operated on, but did not show a similar improvement, and seemed to indicate that this mode of treatment is not effective after the menopause.

PRACTICAL DISINFECTION IN SCHOOLS.

IN the '*Practioner*' for September, Houston has an exhaustive article on this subject, which is in the main applicable to the disinfection of dwelling houses. He summarises as follows: For rooms and for furniture, books, boots, shoes, and articles liable to be injured by steam disinfection, formic aldehyde vapor, preferrably Lingner's (glycoformal) ap-

paratus, one apparatus for a room 2,800 cubic feet, 2 litres of glycoformal being used. Duration of exposure 4 hours.

For general washing purposes, corrosive sublimate 1 in 1,000.

For excreta, sputum, vomited matters, corrosive sublimate 1 in 500. Duration of contact one hour. The mixture to be thorough.

For linen, cups, saucers, plates, spoons and knives, boiling water.

For bedding, clothes, hangings, carpets and under garments (other than linen) saturated steam at 115° C. for 30 minutes.

This would indicate a reasonably safe and practical method without reference to alternative methods or choice of different disinfectants.

ANTIDIPHTHERITIC SERUM.

WITH regard to the durability of this serum the following excerpt from the circular letter issued to the profession in France by the Minister of the Interior, reproduced from the '*Chemist and Druggist*', is of interest:

"The mortality of diphtheria has been reduced by the use of anti-diphtheritic serum. It frequently happens that when doctors have anti-diphtheritic serum which is a few months or even a few weeks old, they will not use it, and prefer to wait for a fresh supply. In this way precious time is lost, and often the life of the patient is endangered by the delay. Medical men certainly may get new serum if they judge it necessary, but they should immediately use what they have in hand. *Repeated experiments have shown that the serum loses none of its curative qualities by being kept even for a year.* When the injection of serum is made the very day the false membrane appears the mortality is practically *nil*, and does not exceed two per cent. When the injection is made the second day the proportion of mortality increases to six per cent."

ACETOZONE IN TYPHOID.

IN the *Therapeutic Gazette* of October 15th, Abt and Lackner, Chicago, report forty cases of typhoid fever treated with Benzoyl Acetyl Peroxide (Acetozone), at the Michæl Reese Hospital. The average age of the patients was eight years and nine months, and there were complications in thirteen cases. The following is a summary of their conclusions:

The Widal test gave positive reactions in every case.

The diazo-reaction was seen in the urine of twenty-five cases; was absent in eight cases; and not tried in seven cases.

The spleen was enlarged and palpable in thirty-eight cases.

Rose spots were present in twenty-five cases, and epistaxis present in four cases.

Acetozone in the powder, plain, or mixed with jelly or raspberry syrup, is not palatable, and mixed with milk is objected to by the majority of patients ; the aqueous solution, to which a few drops of orange extract is added, is the most easily taken.

Nineteen ounces of the acetozone were used in the test; an average of 210.5 grains to each patient, or less than one-half an ounce.

Recovery took place in all but two cases, one of which succumbed to pneumonia and edema of the lungs and the other as a result of great pyrexia on the fifth day.

Stupor and tympanites were almost entirely absent in our series of cases.

Hemorrhage occurred twice, both times in the same case.

The characteristic typhoid fetor of the stools was markedly diminished.

Acetozone does not seem to act upon the heart or respiratory organs.

The average duration of the illness before admittance to the hospital of thirty-seven cases was eight and one-half days ; in three the time could not be ascertained.

The average duration of the fever after the acetozone was begun was thirteen and one-half days in thirty-seven cases, including two relapses.

The average duration of the illness from inception to convalescence of thirty-six cases, including the two relapses of six days each, was twenty-three and six-tenths days. In four cases the records are incomplete.

The duration of the disease is reckoned from the day the patient became sick enough to be cognizant of the fact.

APPENDIX CLAMP.

IN the *Journal of the American Medical Association* for October 11th. Eastman, of Indianapolis, advises that, in the operation for removal of the appendix, the amputation be done by a Paquelin cautery, and to facilitate the operation and meanwhile protect the caecum from injury he has devised a clamp fitted with shields which are removable, for holding this organ during the amputation. After this has been done, the purse-string or Lembert sutures are put in place, a probe is passed to make certain of the potency of the opening, then the stump is invaginated and the sutures tied.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

GLIOMA OF THE RETINA—A REMARKABLE FAMILY HISTORY.

NEWTON, in the *Australian Medical Gazette* for May, cites an interesting case of glioma of the retina in both eyes in a child two years of age. Enucleation would not be allowed, and no treatment was therefore adopted. The *family history* formed the most interesting feature of the case. The present case was the youngest of sixteen children, of whom ten had been afflicted with glioma of the retina and died. None lived over three years. Seven of the cases were bilateral. Of the seven who died without operation, the eyeballs ruptured in every case except one.

THE EAR IN RELATION TO GENERAL MEDICINE.

MACLEOD Yearsley, F.R.C.S., in *The Medical Times and Hospital Gazette* for August, writes on the intimate relationship that should exist between the otologist and the general practitioner. The ear is not merely the organ of hearing, but is equally the peripheral organ of equilibration, and a supplemental organ for space perception; and the surgeon who, so to speak, never views the ear through anything but a speculum, who never thinks of anything but local treatment, is not an otologist and never will be one. The necessity of facilities for continual practice is insisted upon, as, without this, the manipulative dexterity, necessary in aural work, will be wanting.

The close association that should exist between the family physician and the specialist is nowhere more necessary than in the young, where, by timely interference, not only may the auditory function be saved, but life itself. Politizers favorite text is quoted: "The temporal bone is four-sided. On the one side it is bounded by life; on the other three sides, by death." The care of the ear, during the exanthemata, is strongly insisted upon. Frequent examinations of children's ears and throats are advised, so that commencing deafness, with or without discharge, and the presence of adenoids, with their far reaching effect on the general health, may be met by proper means. Mention is made of various aural reflexes that may exist, as *ear cough*, *ear sneeze*, and, occasionally, epileptiform convulsions. Not infrequently tympanic congestion, with slight deafness,

and tinitus are due to menstrual disorders; and should be treated by the family physician, and not by the aurist. The connection between the kidneys, digestive organs, the circulatory system, and various intra labyrinthine lesions, is pointed out, showing the advantages of mutual exchange between the family physician and the aural surgeon.

THE PINEAPPLE IN LARYNGOLOGY.

WYATT WINGRAVE, in the June LANCET, writes on the value of pineapple as a proteid digestant. Its active principles is Bromoline, which is completely destroyed by preserving and cooking. He states that the pineapple has a valuable and powerfully solvent action upon plastic exudation, such as diptheritic membrane, and he recommends it to soften the horny papillæ of keratosis of the tonsil.

LABYRINTHITIS AFTER ADMINISTRATION OF SALICYLATES.

SCHEYER, in *Wiener Med. Presse*, reports the case of a laundress who was given .5 gm. sodium salicylate five times daily in the treatment of a second attack of acute articular rheumatism, three years after the first. After a week of this treatment, symptoms of an affection of the middle ear developed, and persisted, notwithstanding suspension of the drug, resulting in permanent deafness, complete in one ear and partial in the other.

Sodium salicylate and quinine should be given with caution, in large doses, to those whose middle or inner ear is abnormal.

THE EARLY TREATMENT OF SQUINT.

THE idea that squint is a condition which will spontaneously subside, as the child grows older, is no doubt the reason why so often no attempt is made to remedy the defect, until after the lapse of many years, until, in fact, much, and it may be irreparable, damage has been done to the visual powers of one of the eyes. Another erroneous idea, also very prevalent, is that if a child be made to wear glasses for the purpose of obviating the tendency to squint, the wearing of glasses will thenceforth be compulsory. It is hardly necessary to point out that the exact opposite is the case, that indeed, if the patient be brought under treatment as soon as the squint is noticed the glasses, in the majority of instances, can be laid aside at or soon after puberty, being, in fact, needed after that period only in presence of some marked error of refraction,

which would in any event necessitate their use for near work. Now that a commencement has been made with the methodical examination of the refraction in school children, we may hope that a better knowledge of the elementary facts of optics will permeate the masses, increasing the child's perceptive faculties and remedying early the tendency to this disfiguring error of convergence.—*Medical Press and Circular.*

A SIMPLIFIED METHOD OF OPERATING FOR DEFLECTION OF THE CARTILAGINOUS SEPTUM.

DUNDAS GRANT, in the September *Journal of Laryngology*, describes another method by which these troublesome cases may be managed. He combines the methods of Moure and Roberts, thereby doing away with the former intra-nasal splints, which the author has found very satisfactory. A strong needle is introduced into the nostril, and passed through the septum, on the concave side, anterior to the convexity. Having passed through to the other side, it is then used as a lever to press the convex part into the concave side, being then passed back through the septum, so as to keep it in position. Moure's cuts are then made by Moure's shears, horizontally below the deflection, then obliquely in front of and above it, parallel to the ridge of the nose, the incisions NOT meeting in front. This triangular piece of cartilage may now be manipulated with the fingers to encourage over riding.

CONGESTION OF THE EYE.

LEIDY, in *Amer. Med.*, says : In congestive conditions of the eye of gouty origin with pain and tenderness, I have found prompt relief not only from pain, but almost instant clearing of the conjunctiva and associated vascular system, the congested eye clearing and appearing almost normal, from the instillation of 2 or 3 gtts. of the following :

℞	Formalin	005
	Cocain hydroch	1
	Aq. destil	10

EAR DISEASE IN HYSTERIC SUBJECTS.

VOSS, in the *Archives of Otology*, summarizes his paper in the following : " 1. The objective picture of an acute otitis media may appear as a symptom of hysteria. 2. Pure functional neuroses of the ear should be treated, not by an otologist, but by a neurologist. 3. In these cases an absolute contra-indication exists against too much treatment, especially of the nose and pharynx. 4. The generally well-known

craving of hysterical subjects for operations may also centre upon the ear (and probably also upon the nose). 5. Opening the mastoid process te relieve the mastalgia of hysterical patients is absolutely contra-indicated. 6. Our present method of after-treatment of radical operations with prolonged tamponing is not at all suitable for children or nervous and hysterical patients. After the fifth day the tampon is entirely superfluous and should be replaced by a simple outer dressing."

HAEMORRHAGE IN NASAL OPERATIONS.

McREYONALDS, at the American Rhinological, Laryngological, and Otological Association, reported a case of severe haemorrhage following the removal of an exostosis, situated rather high in the nose. Adrenalin had been used, but the haemorrhage occurred very soon after the operation. When the patient was seen, he was almost exsanguinated, and the haemorrhage was only controlled by plugging the posterior nares. In the discussion which followed, various devices were spoken of as being useful in such cases. Freudenthal of New York uses a double ice bag applied like a saddle over the bridge of the nose, and stypticin internally. Stucky uses a strip of dental rubber, over which is placed a piece of Bernay's sponge or splint. Goldstein found that saturating the cotton, or gauze, with oil, in order to make it impervious, gave better results than when other than oily solutions were used. Adrenalin, in strengths of one to six or eight thousand, was frequently very efficacious. Ellis puts his patients on calcium chloride prior to operating, and claimed that secondary haemorrhage was made much rarer.

BACTERIOLOGICAL DIAGNOSIS OF MEMBRANOUS INFLAMATION OF THE THROAT BY A SIMPLE METHOD.

BAYNE, in the *Jour-Eye-Ear and Throat diseases*, gives a very practical plan by which a rapid differential diagnosis may be made. "Take an egg and boil until hard. Then with sterilized forceps break very gently into the air sac, and peel off the shell and membrane immediately beneath it, leaving enough of the same to protect the culture. Take a swab from the throat, gently smearing it on the surface of the egg, under that part of the shell, which is left. Then take an ordinary cup, and pass it through a flame very rapidly several times to sterilize it. Place the egg in the cup with the broken end down, and leave it by a stove for twelve hours. By this method there is obtained an almost pure culture of diphtheria bacillus, in from eight to twelve hours, as this organism grows more rapidly than the others usually present.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.
Assistant to the Professor of Neuro-pathology, McGill Medical College.

THE meetings of the Montreal Medico-Chisurgical Society have been well attended during the last month, and many of the papers and specimens presented were of exceptional interest. One of the most important of the papers entitled 'Preliminary note upon employment of an anti-streptococcus serum in severe cases of scarlet fever,' was read by Dr. Charlton. He began by referring to a very recent article by Dr. Paltauf of Vienna, which stated that the anti-streptococcus serum had been used clinically since Nov. 1901 in about 84 cases with the result that the mortality among 400 cases of the disease in the St. Anne's Hospital has been reduced one half.

Only the more severe cases in the hospital were treated with serum on account of the difficulty in obtaining a sufficient supply. All of the children who were treated within three days of infection, recovered; their condition underwent a striking and rapid improvement, and the pyrexia in many cases greatly abated. In consequence of these results, Dr. Charlton felt justified in reporting the cases upon which he has been working since Jan. 1901, although few in number.

While working upon scarlet fever cases, it was found that, in cultures taken from the tonsils and pharynx of 117 patients, streptococci were found in 55.5 per cent. From 25 of the more severe cases cultures have been obtained from the blood during life, and always from the pus of suppurating glands and the discharge from otitis media, while the urine also has been found to contain streptococci. In the mild, uncomplicated cases none were found, and these were the cases which gave no trouble and made a rapid recovery. The severity of the attack appears to be due to the concurrent action of this micro-organism and the causative germ of scarlet fever upon the susceptible individual. The administration of anti-streptococcus serum was therefore indicated, to counteract the effects of the toxines of the streptococcus, and to bring about the destruction of that organism. Several serums were tried by Dr. Charlton with little effect, but, with the last, specimen which he obtained from Dr. Hubbard, he has, since June last, treated with encouraging results 15 cases of scarlet fever. All of them were severe, and the majority would have in all probability either have ended fatally or have been followed by complications under ordinary treatment. Thirteen recovered promptly with

practically no complications, that is there was no albuminuria and no otitis media. In all the cases upon admission there was involvement of the cervical glands, but only in two instances did they go on to suppuration ; in the other cases, resolution occurred within 48 hours after the injection of the serum. There were two deaths. One happened four hours after entering the hospital, the patient being moribund on admission. The other, who was also suffering from pneumonia, succcumbed to laryngeal diphtheria.

The quantity of serum injected is usually 20 c. cm. and the effect is generally prompt, the temperature falling within two hours and returning to normal in two to four days. Desquamation is as a rule complete by the thirty-second day. A summary of the results obtained by the injection of the serum is as follows:

1. Rapid subsidence of the pyrexia.

2. An accompanying decrease in pulse-rate with improvement in tension or rhythm.

3. Prevention, or at least, marked amelioration of such complications as cervical adenitis, otitis media, and albuminuria.

4. Rapid and favourable convalescence in the majority of cases.

At a former meeting, Dr. Adami showed a pathological specimen of a recto-vaginal fistula due to cancer of the neck of the uterus with subsequent sloughing. It was of large size, three fingers being easily admitted into the opening. In addition the patient showed a condition of true chylous ascites, the chylous fluid being also found in the left side of the thorax. It was found that the thoracic duct was pressed upon by enlarged glands, opposite the body of the fourth dorsal vertebra, with consequent swelling of the duct below this point. This obstruction undoubtedly accounted for the milky fluid found in the abdomen and chest.

Drs. Finley and McRae reported a case of congenital absence of the left kidney. The patient was 36 yrs. old when he died, and the history and symptoms pointed to interstitial nephritis. Uræmia was the cause of death. The post-mortem showed that the left kidney was quite absent, although the suprarenal was present and of normal size. The trigone of the bladder was normal, but the opening for the ureter ended in a blind pouch about half an inch in length. The right kidney was small and granular, weighing but 90 gms. Microscopically, the glomeruli were unusually large—about three times the size of those found in a normal organ.

Dr. Anderson demonstrated an unusual specimen of a heart with congenital absence of the right side. The child appeared to be normal at birth, but within twenty-four hours became much cyanosed and died

shortly after. A very hurried post-mortem was made owing to limited time, and in consequence the doctor was unable to trace the great vessels, but he removed the heart and lungs together. The heart consisted essentially of an auricle and ventrical with a bicuspid valve between. Two veins lead into the auricle and one artery away from the ventricle. The distribution of the branches of the aorta are quite anomalous, but, as previously stated, they could not be definitely traced on account of the short time allowed for the post-mortem. On looking up the literature of the subject, it was found that no similar instance of complete absence of the right side of the heart, in a full term child, had been recorded.

The fifty-eighth annual meeting of the Montreal Maternity Hospital was held at the beginning of the month at the hospital, St. Urban Street. The annual report stated that the new hospital building decided upon would cost $100,000, and that, as only $65,000 had been collected for the hospital fund, $25,000 of which had gone for the purchase of the site, it was felt that the money necessary to make up the sum named in the estimates for the building must be obtained before work was begun, as the equipment of the hospital would be an additional expense. It was hoped, however, that before the next annual meeting work would be begun on the new building. The treasurer's report showed a balance of $5,137 now in the bank. . Dr. Cameron read the medical report which was also very satisfactory; 239 patients were treated during the year among whom three deaths occurred.

The thirty-second annual dinner, given on Nov. 6th, at the Place Viger Hotel, under the auspices of the graduates and undergraduates of the university of Bishop's College, was a great success in every way. The presence of the Hon. I. J. Tarte lent additional interest to the proceedings. In his speech, he kept rather strictly to generalities, but mentioned Dr. Roddick's bill, which he strongly supported. He also spoke of the Montreal Civic Hospital, and suggested that there should be a building in common to both sections of the people, under one medical administration; but that the Roman Catholics might have their own nurses if they wished it.

Dr. W. H. Drummond in replying to the toast, "Our Deans and Professors," spoke of the emigration of our prominent medical men to the United States, but he believed that the development of Canada would soon put a stop to this, and he urged the students to neglect secret societies and work for the good of the institution and Canada.

Principal Whitney, Dr. Grant Stewart, and Sir W. Kingston, were also among the speakers of the evening.

MEDICAL SOCIETIES.

THE TORONTO MEDICAL SOCIETY.

(Stated Meeting Nov. 6th.)

The president, Dr. Hay in the chair.

Dr. McPhedran presented a case in practice:—A young man, age 30, cutter by trade, habits irregular. At 19 he had syphilis and was under treatment for a short time. He then stopped treatment, and was well for 4 years. 6 years ago, there was a fire in his shop, and, on the Police waking him, he found his legs were weak, being hardly able to carry him. There was a gradual decline in power, he was always worse after a nights dissipation, and continued to grow worse for three years, since that time there has been little change. The bladder, when full, dribbles, if not emptied, sexual functions is impaired, and the system sensory is good above the legs. A condition of spasm is marked in the right leg, knee jerk is exagerated, especially on the right side. Ankle clonus, and dorsi-flexion of the great toe are extremely marked.

Dr. Peters read a report of a case of Femoral Hernia, containing the whole of the Omentum and Transverse Colon and the Bladder.

Mrs. M. aged about 75 years, had suffered from femoral hernia on right side for over 30 years. It had never been reduced, but had increased in size, particularly during the last 18 months. At the time of operation, the tumor extended from the anterior superior spine of the ilium to the symphisis pubis; and, depending from that base, to an apex which, in a standing position, was situated about four inches below Poupart's ligament. Its neck was external to the spine of the pubes. Until the last year it had given but little trouble, but latterly the tumor had increased so much in size and was so painful that she was quite incapacitated for work, and was practically bed-ridden. She described the presence of colicky pains in the tumor, but any more definite history was not obtainable, owing to the senile feebleness of mind which was present in the case.

A curvilinear incision, about 4 in. long, was made over the tumor, slightly below the level of Poupart's ligament, so that its middle would correspond to the position of the femoral ring. On opening the sack, it was immediately apparent that it was occupied by the transverse colon, and the whole of the omentum which was enormously thickened and matted together. As it was found impossible to disentangle the folds of

omentum, the whole mass was ligated in sections by interlaced ligatures of silk and removed. Even after thus reducing the size of the mass, it was found impossible to reduce it without completely severing Poupart's ligament, and even when this was done, reduction was effected with considerably difficulty. Up to this time, the presence of the bladder, as a part of the protruding mass, was not suspected; and, in fact, it was during the process of separating the sac, with a view to forming a pedicle, that the bladder was accidently opened, and a flow of urine occurred. Even then it was thought that possibly the fluid had been contained in a cyst in the canal of Nuck; but, on passing a sound into the bladder, the true nature of the condition was revealed. The protruding portion of the bladder was not properly contained within the sac of the hernia, but constituted, in fact, a portion of that sac, and was surrounded and covered by a thick layer of adipose tissue. When the nature of the condition became apparent, the bladder wall, which was greatly stretched and attenuated, was carefully closed by two layers of continuous sutures of very fine cat-gut. The bladder was then returned, and the peritoneal margins of the hernial sac were sutured together. Attention was now turned to the performance of a radical cure of the hernia by stitching the margins of Poupart's ligament, turning up the fascia covering the pectineus muscle, and making it fast to Gimbernat's and Poupart's ligaments. A small drain of iodoform gauze was then passed down to the region of the rent in the bladder, and the remainder of the skin wound was closed with cat-gut and silk worm gut sutures. Though the operation was tedious, and notwithstanding the decrepid condition of the patient, she made an uninterupted recovery. She seemed to suffer but little from shock, and had little pain. The bladder was drained for three days, by means of self-retaining glass catheter, no leakage whatever occurring at the wound. The gauze drain was removed on the second day, and the subsequence progress of the patient was perfectly satisfactory. There is a slight prominence of the whole area of operation, but no distinct recurrence of the hernia. The main points of interest were —

1st. The unusually large size to which this femoral hernia had grown.

2nd. The fact that its contents consisted of the omentum and transverse colon, which are very seldom found in femoral hernia.

3rd. The presence of the bladder in the wall of the hernia.

In regard to the first two but little need be said. It is evident, however, that the transverse mesocolon must have been enormously elongated, in order to permit the whole of the transverse colon to occupy a level below Poupart's ligament. The fact that the hernia had been irreducible from the first probably was a reason for the firm matting together and hypertrophy of the omentum which no doubt occurred in situ. The massive character of the hernia was due, therefore, not entirely to extrusion of more and more of the abdominal contents, but to an

increase in the dimensions of the parts already extruded. The presence of the bladder in the tumor, however, is of much more than passing interest. Hernia of the bladder in any situation is a very uncommon condition, and hernia into the femoral canal much more rare than that into the inguinal canal, or through the linea alba.

In the causation of hernia of the bladder, two factors appear to be operative in different instances. In the first place the hernia is preceded by a dilatation of the bladder, due to some obstruction to the out-flow of urine. In that case, the violent straining serves to bring about a hernia through the linea alba, or through other hernial openings, on the same principle as in the formation of ordinary hernia of the intestines. The other variety of cause is mentioned by White and Martin in their work on Genito-urinary Diseases as follows: "The most frequent cause of bladder hernia is a preceding intestinal hernia, which, as it progresses and drags on the peritoneum in the formation of a sac, involves the bladder." This condition clearly explains the occurrence of the hernia of the bladder in the case related, since the hernia was of such large dimensions that it could not acquire a sac for itself without involving that portion of the peritoneum which covered the bladder. In that manner, then, without doubt, the bladder was drawn into the femoral opening, and constituted a portion of the wall of the sac.

Discussion.—Dr. Rudolf asked if there had been any signs of irritation of the bladder ?

Dr. Oldright said it was advisable to be sure where the bladder was by passing a catheter, or have a nurse do it before doing any abdominal operation.

Dr. Hunter asked why in one so old an operation had been thought necessary ?

In reply Dr. Peters said that the bladder had not been irritable, that the history had been very incomplete, and no definite information could be got from the patient, owing to her mental condition. He was not certain that we do not operate enough in old people. He agreed with Dr. Oldright, but he would not allow a nurse to pass the catheter, nor would he, if it could be avoided. The bladder was often covered with fat, and, in clearing this out, it was often injured.

Dr. Oldright reported a case of Surgical Emphysema and Hæmatemesis. While at work, the man had stepped on the end of $\frac{3}{8}$ in. board throwing it up and striking his throat against the end, he fell but got up again and tried to go on with his work. Unable to do so he went home on the cars. He had had previous attacks of dyspnœa and thought this one of the usual kind, as, however, there was no improvement after his usual treatment, Dr. Wylie was called, and Dr. Oldright saw him later in the same evening with Dr. Wylie. Emphysema was very marked, extending up the face to the level of the Zygoma on each side, and downward over the thorax. The neck was bluish in color from blood and he was also vomiting blood. After death, the trachea was removed and was presented for examination. It showed a tear on the left side of the trachea, extending into the Aesophagus, and two other small tears.

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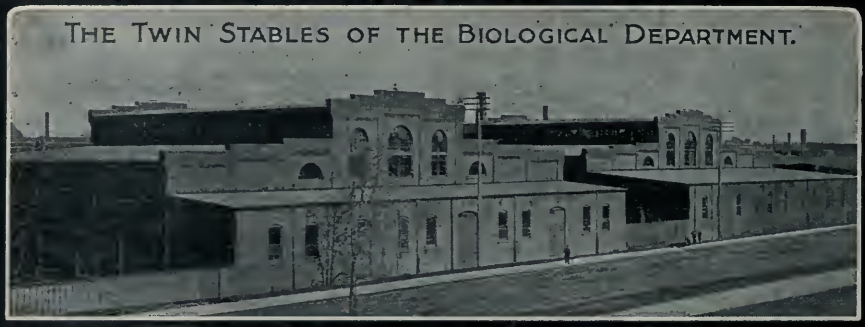
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THE CANADA LANCET

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EDITORIAL.

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

IT would be difficult for the members of the medical profession in Canada to imagine any organization that would be of greater use to them than a powerful and well managed Protective or Defence Association. From time to time, medical practitioners are called upon to defend themselves, in the courts of law, against actions for damages, under the charge of malpractice. Most of these cases arise out of complete ignorance on the part of the plaintiffs, or his friends, or from a desire to extort money from the medical attendant, under the assumption that he would pay something rather than have the unpleasant notoriety of such a suit against him, or be put to the expense of a defence. Most people are aware of the fact that law is a costly thing. In many instances of threatened action against medical men, the real motive is to extort money as blackmail.

At the meeting of the Canadian Medical Association in Winnipeg, 1901, it was resolved that steps be taken to organize a Medical Defence Association. Dr. R. W. Powell, of Ottawa, was elected president, and was asked to undertake the work of organization. Dr. J. Camarind, of Sherbrooke, Que., was made vice-president ; Dr. J. A. Grant, Jr., of Ottawa, was chosen as treasurer ; and Dr. F. W. McKinnon, of Ottawa, as Secretary. These gentlemen have given a vast amount of valuable time and thought to the promotion of the Defence Association. They deserve and no doubt will receive that generous support from the profession, which their efforts merit, and the importance of the work demands. At the recent meeting of the Canadian Medical Association held in Montreal, these gentlemen were all re-elected.

But it will not do for the members of the profession to think that they have done their duty, when these gentlemen were re-elected. This is but a small part of the duty which each member of the profession owes to his fellow members. Excellent officers have been chosen. The writer happens to know something of the good work they have already accomplished. The real duty of the individual practitioner is that of becoming an active member of the Association. The annual fee has been placed at the merely nominal sum of $2.50. This is as nothing when it is compared with the advantages of such an organization.

Of these advantages we need only mention two or three. In the first place, if an action for damages is brought against a member, he receives financial assistance. This makes him bold in resisting an unjust attempt to extort money from him. Another advantage is to be found in the fact that such an organization would go a long way towards preventing malpractice suits. Most suits of this kind are unjust and known to be so to the plaintiffs. If it was known that they would have the entire profession to fight, instead of a single member thereof, they would count the costs with much more care before they embarked on their suits. And, again, the costs would fall lightly on the defendant member. It is not beyond the truth to say, that, though an action may be unjust, and could be successfully defended, the doctor against whom it may be brought could ill afford to defend himself, or, if he did, he might be well nigh ruined in doing so. This can all be avoided by being a member of the Canadian Medical Protective Association. But there is one more reason for joining this organization. Nothing will bind the profession together like that of mutually helping each other.

The profession as a whole is loyal to each other; but it is in a sort of indefinite way, or merely by a feeling of professional goodwill. Here is something concrete. Each member of the Union feels that he has a direct interest in all the others; and, in turn, feels that they have a personal interest in him. In the time of trial, this will be most keenly appreciated.

Already the Association has rendered yeoman assistance to several of its members, against whom action for damages have been brought. This assistance would have been much greater, if the funds had permitted the executive to have been more generous—as generous as they would wish to have been, and as the righteousness of the cases demanded. But what the Committee has done is only an earnest of what it will do in the future. There are two things that each member of the profession can do. The first is to send in his own fee of $2.50 to the treasurer of the Association, Dr. J. A. Grant, Jr., of Ottawa. The second is to induce others to do the same thing by upholding the claims of the Protective Association in his locality. One of the most successful ways of helping yourself is to help others. By assisting your fellow practitioners in the hour of their trouble, you secure their sympathy and assistance in the hour of your own trial and anxiety.

It must be a cardinal principle in the Society that the Association cannot be responsible for acts in a member's career prior to his joining. Special cases will arise deserving of consideration, or where a suit is laid against a man after he has joined, but where the act, on which the suit

is based, occurred before membership and yet, at the time of joining the Association, the member was unaware of any suit pending. If this principle is not laid down and understood, the Society will be a failure, because there would be no incentive to join until trouble looms on the horizon.

Another point of importance is that no real practical difficulty will arise, when a case is laid in a Province a long way from the seat of the Executive. The Executive will take means to employ local provincial counsel, and all that they would have to be possessed of would be an opinion on the merits of the case, by a local committee of our own profession, well qualified to judge of the facts.

That union is strength could be nowhere more perfectly illustrated than it is by the present organization. It is a matter of the greatest encouragement to those who have legal action pending against them, to know that they have such backing; and it has had the effect of stopping more than one suit by its deterrent influence. We know of some cases where doctors have been nearly ruined by the expenses involved in their own defence. Recently three cases for malpractice have been tried in Ontario courts, and, in every instance, the doctors won. Their victories, however, cost them heavily. Let the profession of this country adopt the national motto of the great country to the south of us, *E pluribus unum*. The following free translation of a beautiful stanza in one of Horace's odes, may not be inappropriate :—

"Thrice happy they, whose hearts are tied
In love's mysterious knot so close,
No strife, no quarrels, can divide,
And only death, fell death, can loose."

THE UNIVERSITY OF TORONTO MEDICAL STUDENTS V. THE POLICEMEN.

THE University of Toronto Medical Students were spending Hallowe'en at the Student's Union, with Professor Reeve, Dean of the Medical Faculty and some other members of the teaching staff. On their way home; and prior to their separating for their respective homes, while walking along the street and singing some college songs they were charged by a number of mounted policemen. The students offered no resistance, nor were they doing anything that justified the attack made upon them. Professor Reeve, who was with the students, complained of the action of the policemen on the occasion in question. He was given a hearing before the Police Commissioners, and spoke as follows :—

"It was also high-time a definite understanding was reached as to what was permissible on the part of students on ordinary or extraordinary

occasions. Toronto could afford better to do without her police than without her students. Students and citizens had not only some rights, but some liberties that a policemen had not, and when the guardians of the peace became the aggressors it was time for citizens to complain. Some of these young men had fought in South Africa, yet on returning peaceably from an entertainment, they were hunted about like cattle—worse treatment than the Boers received. Their crime seemed to be that they had walked upon the sidewalk, not injuring persons or property, not carrying sticks, and merely singing. The treatment was suggestive of what they read about in Russia."

Dr. Reeve's action in this matter is highly commendable. After the case was fully heard and discussed on both sides before the police commissions, four of the police force were fined. In this, both Dr. Reeve and the students were amply vindicated in the stand they had taken against the treatment to which they had been subjected by the police on the occasion. The report of the Police Commissioners concludes with the following words:

"The extensive powers entrusted to the police, the exercise of much of which must be left to the sole discretion of the individual officer, frequently under trying circumstances, calls for the soundest judgment and the utmost self-control. In the present instance the board regret that the officers abused their powers without sufficient justification."

THE ONTARIO MEDICAL COUNCIL.

BY the time this issue of THE CANADA LANCET will have reached its many readers, the election of members to the Council will be over. We hope the choice made in the various electorial districts will prove a wise one. During the many years that the Council of physicians of Ontario has directed the medical affairs of this Province, many and important changes have been effected. There are some who will maintain that the Council has not always done the very wisest thing. But it is a much easier matter to criticise acts than to formulate these acts and to carry them into execution.

Take the records of the Council as a whole for the past 25 years, and it will at once be apparent to all that the general movement of thought has been in the direction of the elevation of the standard of the medical profession of the Province. As a proof of this statement it would be difficult, indeed, we think it would be impossible, to mention any country or province in which the medical educational standard is superior to that of Ontario. This is surely not a cause for complaint; but, rather, one for congratulation.

The Council has for some years demanded a five year course of study. The Province of Quebec is now moving in the same direction. Some rather sharp criticism has been passed upon the action of the Ontario Medical Council for its attempts to raise the standard of preliminary education. This should merit praise, and not condemnation. To have a good liberal education before entering upon the course of professional studies is of the utmost value to the student; and, later in life, to the public. At the recent meeting of the Board of Governors of the Physicians and Surgeons of Quebec it was decided to require the complete classical course, or what is equivalent to a degree in arts. This is much higher than the standard in Ontario. We hope that the Medical Council will continue in the same frame of mind it was in last year, when it decided upon the honor matriculation as the minimum standard of entrance to the profession. To this attitude, no member of the profession should dissent; nor should any person in the general public, when it is borne in mind that one of the chief glories of any country is a highly educated medical profession.

ANTI-STREPOTCOCCUS SERUM IN SEVERE CASES OF SCARLET FEVER.

MEDICAL practitioners will welcome any genuine advance in the therapeutics of scarlet fever. It has long been known that some epidemics of this disease assume a most malignant and fatal type. In the October number of the Montreal *Medical Journal*, Dr. G. A. Charlton contributes a paper on the serum treatment of severe cases. He refers to the results obtained by Paul Moser, of Vienna, who states that, in 400 cases treated with the anti-streptococcic serum, the mortality has been reduced one-half. Only the severe cases were thus treated. All who were treated within the first three days recovered. Their condition underwent rapid and striking improvement, and the pyrexia in many cases greatly abated.

Dr. Charlton states that he has studied bacteriologically 117 cases. Cultures were taken from these cases, and streptococci found in 65 or 55.5 per cent. From 25 of the most severe cases cultures were taken from the blood and the germ always found to be present. They were also found in the pus of suppurating glands, or purulent otitis. As the result of these observations, the author came to the conclusion that the streptococci lead to a secondary infection, and that this secondary streptococcal infection is the cause of most, if not all, of the unfavourable

complications of the disease. The severity of the attack appears to be due to the concurrent action of the micro-organism.

The administration of anti-streptococcus serum was, therefore, indicated to counteract the effects of the toxines of the streptococci and to bring about the destruction of these organisms. For it appeared that if this could be accomplished, the cases would resolve into a less severe type and the prognosis would become more favourable. Of several sera employed, the one that yielded by far the best results, was that prepared in the biologic laboratory of F. Stearns & Co., of Detroit. In some severe cases, the author has no hesitation in saying that, under ordinary treatment, they would either have been fatal, or have suffered from lingering and troublesome complications.

The quantity of serum injected has been moderate. The usual dose was 20 c. cm., but in those cases which, from the severity of the attack, seemed to require a larger quantity, this dose was repeated.

The effects of the use of the serum are:—

1. Rapid subsidence of the pyrexia.

2. An accompanying decrease in pulse-rate with improvement in tension and rhythm.

3. Prevention, or, at least, marked amelioration of such complications as cervical adenitis, otitis media, and albuminuria.

4. Rapid and favourable convalescence in the majority of cases.

THE REFERENCE HANDBOOK OF MEDICAL SCIENCE.

MR. E. A. PAUL, representing Messrs. Wm. Wood & Company, the well-known publishers of New York, has been engaged for sometime introducing to the medical profession The Reference Handbook of Medical Sciences. Mr. Paul is meeting with much success. Very many doctors know the work by the former edition, which appeared a number of years ago. The present edition is thoroughly revised, many of the articles having been entirely rewritten. It is the intention of the publishers to issue a further edition in a number of years. To those who take the present edition, a considerable rebate will be allowed on the next edition, the present one being taken back. This offer should commend itself to very many. We have examined the four volumes that have appeared up to date, and can speak in the highest terms of their merit. A good workman will try to secure the very best tools; and, as books are among the tools of the doctor, one would naturally think he would try to secure the best. It would be hard to find anything better than the Reference Handbook of Medical Sciences.

EDITORIAL NOTES.

Elected to the Medical Council.

The following members of the Council of the College of Physicians and Surgeons have been elected by acclamation:—J. L. Bray, M.D., Chatham; J. A. Robertson, M.D., Stratford; L. Brock, M. D., Guelph; J. Henry, M.D., Orangeville; P. Stuart, M.D., Milton; S. H. Glasgow, M.D., Welland; A. A. Macdonald, M. D., West Toronto; J. H. Sangster, M. D., Port Perry; S. C. Hillier, M D., Bowmanville; T. H. Thorburn, M.D., Consecon; W. Spankie, M.D., Wolfe Island; J. Lane, M.D., Mallorytown; J. MacArthur, M.D, London; W. Britton, University of Toronto; V. H. Moore, Queen's College; J. A. Temple, M.D., Trinity Medical College.

Justus Test for Syphilis.

Dr. Jacob Justus in 1895 published a paper on a new means of diagnosing syphilis. He contended that if mercury be administered subcutaneously, or by inunction, there will be a diminution in the hæmoglobin in the blood. In the non syphilitic the loss is rapidly made good; but in the syphilitic, at the end of 24 hours, there will be a reduction of from 10 to 20 per cent. in the hæmoglobin. Recent experiments make by Dr. Henry Tucker, of Philadelphia, and Dr. W. E. Huger, of Charleston, and published in *Philadelphia Medical Journal* for 10th May, show that no reliance can be placed in the Justus test. The test fails in several ways. There is sometimes a fall in the hæmoglobin in the case of chancroids. In other cases there is a rise in the amount of hæmoglobin. In the syphilitic cases, there was noticed sometimes a distinct rise in the amount of hæmoglobin, instead of the reduction according to Justus. In this way the test fails both negatively and positively. These experiments go to show that the test is of no practical value.

Toxicity of Ammonium Compounds.

The comparative toxicity of the ammonium compounds was the subject of Drs. Rachford and Crane's paper at the Association of American Physicians. They showed that ammonium, in combination with the acid ions found in the body, formed more toxic compounds than sodium in similar combination. When the ammonium is united with an organic acid, the compound is comparatively non-toxic, but when it is united with an inorganic acid ion, the resultant salt is very poisonous. The potassium ions are about one-half as poisonous as the ammonium ions. The sodium compounds are the least toxic, and hence sodium should be employed as the neutralizer of the acids producing acid intoxication. The acid ions cause acid intoxication by carrying the ammonium.

Arteriosclerosis.

Arteriosclerosis was the subject of a paper by Dr. I. Adler, read before the New York County Medical Association and reported in the *Medical Record* of 10th May. He does not think Thomas' theory that the changes in the arteries can be wholly explained by disease in the muscular coat. He thinks there is a tendency to fibrosis in the tissues of other organs. As the muscular coat yields, the vessels dilate. To compensate for this there is a formation of connective tissue. Chemical and metabolic changes play an important part in the causation of the fibrosis. He mentioned some of the types of arteriosclerosis. There is the cardiac form of the disease, in which the small vessels of the heart, and the coronaries are undergoing change. Another type is the renal the change taking place in the arterioles and the interstitial tissue. Then there is the cerebral type, with its headaches, vertigoes, and possible hæmorrhages. A spinal type may also occur, resembling ataxy in some respects, but lacking its progressive features. Finally there may be the digestive type, with degenerative changes in these organs. The treatment is mainly to get rid of poisons from the system, such as alcohol, tobacco, lead, syphilis, a proper dietary and the administration of the iodides.

Ovarian Pregnancy.

Dr. John F. Thompson read a paper on the above subject with the report of a case, which is published in the July issue of *American Gynecology*. It is claimed that ectopic gestation is by no means uncommon and that many cases are on record. The statement is made that almost all cases are tubal to begin with. It is almost impossible for an ovum to remain in the peritoneal cavity and become impregnated there, and then take on active growth and development. It is equally difficult for spermatozoon to penetrate into a graafian follicle and there fecundate the ovum in situ. It is, therefore, practically the rule that ectopic gestation commences in the tube where it either develops or escapes to some other adjacent part, and then continues its development. It is held by some that pregnancy can only occur in some part capable of developing a decidua. This would limit the possibility of ectopic gestation to the tubes, where there is a mucous membrane.

In opposition to this view, Dr. Thompson records a case in his practice. The ovary was removed, the patient making a good recovery. There was a distinct ovarian pregnancy. The foetus was about 25 or 30 days growth. The tubes, uterus and the other ovary were quite normal. It was clearly a case of impregnation of the ovum in situ in the graafian follicle.

PERSONAL.

Dr. Hobart S. Gilbert, B.A., of Brooklin, Ont., died last October.

Dr. Armstrong, of Brucefield, has bought the practice of Dr. Spence, of Lucknow.

Dr. Ulyott, of Elmira, and Miss Nettie Snyder were married 23rd October.

Dr. W. H. Alexander, of Toronto, and Miss Laird, of Chicago, were married October 16th.

Dr. Thomas Kerr, of 667 Dovercourt road, Toronto, was married recently to Miss Jean Kerr, also of Toronto.

Dr. C. F. Colter, of Petrolea, who served with the second Canadian contingent in South Africa, was married to Miss Lillian N. Foster, of Belleville, on 18th October.

The marriage of Dr. F. G. Wallbridge, of Midland, and Miss Keating took place on 28th October.

Dr. Patton, of Toronto, had a delightful tour in the United States during October, when he visited a number of the leading cities.

Dr. T. P. Weir, who was formerly one of the medical attendants in the Queen Street Asylum, Toronto, died 27th October at St. Michael's Hospital.

Dr. Charles O'Reilly, of the Toronto General Hospital, has been elected vice-president of the Association of American Hospital Medical Superintendents.

Dr. G. A. Charlton, of Montreal, a McGill graduate of 1900. has been appointed Rockfeller Fellow of Pathology in McGill Medical Department.

Lieut.-Colonel G. Sterling Ryerson, M.D., A.M.S., has been promoted to the grade of Colonel "in recognition of his services as Red Cross Commissioner in South Africa."

OBITUARY.

J. MOORE HART, M.D.

DR. HART, of Toronto, was taken suddenly ill with an attack of apoplexy, while at Huntsville. He went north for a few days hunting, when he was seized with the fatal illness, living only two hours. He was in his 52nd year. He graduated from Trinity Medical College

in 1871. For 22 years, he practised in Cannington, coming to Toronto 9 years ago. He was a member of the staff of the Toronto Western Hospital, and took a lively interest in its affairs. Dr. Hart was held in very high esteem by all who knew him. He leaves a widow and one son.

DUNCAN McLARTY, M.D., L.R.C.P., Edin., M.R.C.S., Eng.

DR. McLARTY began practice in St. Thomas in 1869. He was a graduate of Victoria University, taken his degrees in 1867. He was educated in the Rolph Medical College. After obtaining his M.D. he spent nearly two years in Britain, where he passed the examinations for the L.R.C.P., Edin., and the M.R.C.S. Eng., diplomas. He was a resident physician for six months in St. Thomas Hospital, London. During the thirty-three years he practised his profession in St. Thomas, he took a very active interest in all its affairs. He was at different times a member of the School Board, of the City Council, was Mayor, and a member of the Board of Trade. He was also identified with a number of its business and financial institutions. Among other matters he took a very lively interest in the St. Thomas Hospital. He was a native of the Elgin County, being born in the Township of Southwold, in the year 1849. He was married, in 1882, to Miss Allan, of Port Rowan, who survives him, also one daughter and two sons.

It is a great word to say, but probably no one had as many friends in St. Thomas and district as had Dr. McLarty. In his case he chose the calling in life that eminently suited him. His splendid physique seemed to breathe health in every sick room, while his unfailing human sympathy and gentleness established easy confidence and secured the frankness so much required. He was of even temperament and marked self-control. His decision of character was both marked and unobtrusive. He possessed in a very high degree the power of keeping his own counsel, which secured for him the unbounded confidence of patients. And his skill rose to the level of his many other fine qualities. Day or night, rain or shine, however wearied with watching, driving, or loss of sleep, he ever responded to the call of the sufferer. His life's record is a monument of Parian marble, built on a foundation of granite, and on that monument are written, in letters of gold, the words: "He went about doing good."

BOOK REVIEWS.

ATLAS AND EPITOME OF OTOLOGY.

By Gustav Bruhl, M. D, of Berlin, with the collaboration of Prof. Dr. A. Potilzer, of Vienna. Authorized translation from the German. Edited by S. MacCuen Smith, M. D., Clinical Professor of Otology, Jefferson Medical College, Philadelphia. With 244 colored figures on 39 lithographic plates, and 99 text illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Price $3.00.

THIS volume, like the others of the Medical Hand-Atlas Series, is beautifully illustrated and printed. The picture method of teaching and explaining a subject, as exhibited in this book, is perfectly charming. The descriptions, and treatment of diseased states are brief, but clear and intensely practical. The book, as a whole, is as perfect as it is possible to make it.

THE PUBLIC AND THE DOCTOR.

By a regular Physician. Published by Dr. B. E. Hadra Dallas, Texas.

THIS little volume which would easily go into your coat pocket, consisting of 150 pages, 16 mo., is truly a remarkable one. It covers the ground, in a most lucid and interesting manner, of the family doctor the specialist, the patient, the public, and the advertising "specialist.' The remarks upon every topic are replete with sound advice and good judgment. We will only quote a few of sentences in the book. "A regular physician is one who holds to scientific principles; that is, one who stands upon the findings of untrammeled investigation, upon the outcome of unbiassed experience, and upon unprejudiced reason." "If we survey the history of medical science, we find that no medical discovery of any importance has ever been made, no new method of recognizing healing or preventing disease has ever been introduced; in short, that no real progress has been due to anything but to the efforts of true science." "Most amusing are the stories often heard about certain practitioners, that they were at their best when they were drunk; or that they know more when they are drunk, than all others when sober." "In your behavior toward the family physician do not forget that you relation is one of reciprocity. Do not expect him to discharge his part of the obligation whilst you consider yourself to have done your duty merely by choosing him." "We know of a woman who sitting next to her family doctor at a concert, during the performance of a Beethoven Symphony, pestered him the whole time with a description of her baby's summer complaint."

THE SCIENCE AND ART OF PRESCRIBING.

By E. H. Colbeck, B. A., M.D., M. R. C. P., D. P. H., and Arnold Chaplin, B.A., M. D., M. R. C. P. London: Henry Kimpton, 13 Furnival Street, E. C., 1902, price 5 shillings, net.

THE joint authors of this little work hold a number of important appointments in various hospitals and dispensaries; and have had a large experience in the subject they write upon. The first part of the book deals with the methods of prescribing, taking up the subjects of the prescription, incompatibility, and methods of administering drugs. The second part treats of the application of the methods of prescribing. and gives directions and formulæ for the various systems and organs. The book is full of useful information and excellent formulæ; and reflects great credit upon its authors. The publishers have got it up in most attractive form: Good paper, clearly printed, gilt edged, and bound in limp leather. The book is sure to be perused by many.

THE PHYSICIANS' VISITING LIST FOR 1903.

Fifty-Second year of its publication. Philadelphia: P. Blackeston's Son & Company, 1012 Walnut St. Toronto: Chandler Massey, Price $1.00.

THIS little book is well known and needs but little introduction to to the profession. It is got up in very attractive form, the best of paper being used, and bound in smooth, limp leather, with pocket flap and pencil slide. It contains a calendar for 1903, table of signs, incompatibility of drugs, poisoning, the metric system, table converting weights and measures into grams, dose table, asphyxia and apnoea, comparison of thermometers, a complete table for utero-gestation, and the blank ruled leaves for the various duties of a physician, as visits, appointments, vaccinations, etc. The book is very complete in every way, and will give entire satisfaction.

THE MEDICAL NEWS VISITING LIST FOR 1903.

Philadelphia and New York: Lea Brothers & Co. Price, $1.25.

THIS book is got up in a nice pocket size, bound in stamped, limp leather, with pocket, pencil slide and flap. The paper is of fine quality. The contents of the book are: How to keep accounts, how to keep the visiting list, signs of dentition, to find day of confinement, thermometric scales, ordinary and metric weights and measures, comparative scales, examination of the urine, important incompatibles, artificial respiration, table of eruptive fevers, poison and antidotes, table of doses, therapeutic reminders, ligation of arteries with plate, and the exquisite blank sheets for the record of visits, engagements, vaccination, confinements, etc. We can confidently recommend this visiting list.

PRACTICAL OBSTETRICS.

A Text Book for Practitioners and Students. By Edward Reynolds, M.D., Visiting Surgeon to the Free Hospital for Women; Fellow of the American Gynecological Society; Of the Obstetrical Society of Boston, etc.; Formerly Instructor in Obstetrics in Harvard University and Senior Physician to the out-patients of the Boston Lying-in Hospital, and Franklin S. Newell, M.D., Assistant in Obstetrics and Gynecology in Harvard University, Physician to out patients of the Baston Lying-in Hospital, Assistant Visiting Physician to the Boston Cfty Hospital, in the department of the Diseases of Women; Fellow of the Obstetrical Society of Boston, etc. Illustrated with 252 engravings and 3 colored plates. Lea Brothers & Co., Philadelphia and New York, 1902. Cloth, $3.75 net.

THE object of this work is to present to the students a complete treatise on obstetrics, without unnecessary details or prolonged descriptions—a book complete in itself but not overburdened with notes and remarks on side issues. To obtain this result, the authors have, as a rule, described but one or two well recognized methods of procedure in a given operation, instead of placing a mass of literature before the student and allowing him to take his choice, after a lengthy discussion of the pros and cons. Again, in the opening chapters, where the anatomy of the female genitals is described, the authors rightly take it for granted that the student is acquainted with the subject, and hence only a brief *resumé* is attempted, leaving complicated details to works of anatomy, where they properly belong. Five chapters follow on pregnancy, treating of its diseases and complications, as well as of normal gestation, and all this before normal labour is mentioned. This arrangement is hardly an improvement on the usual plan, which treats of normal conditions first and then of pathological, and, although it may be convenient for reference, it is awkward for a student reading the subject for the first time. In the second part of the book, under the heading natural labor, the preparations and technique essential in routine obstetrical practice are well and briefly described, and the practical hints which are so frequently found throughout the book form a notable feature of this division of the work. The third part embraces obstetrical surgery in all its branches, including the induction of abortion and the use of the forceps. Abnormal labor is the heading of the fourth part, while part five is devoted to the pathology of labour. In the chapter devoted to eclampsia the immediate emptying of the uterus is advised, and the efficiency of Stroganoff's method is considered to be "not proven."

The puerperium is treated in the sixth and last division, and includes the care of premature infants as well as the various puerperal complications. The first chapter in this part is well worth reading, many hints are given which are frequently forgotten in the routine teaching of a lying-in hospital. The student too often assists at the delivery, and then

hears little about the subsequent course of events, and only in a few instances is able to follow the case until discharged. This chapter will not only give him the information required, but will put his mind in a proper attitude of expectancy ready to grasp the meaning of the various signs and symptoms as they appear. The book as a whole is modelled to some extent after Jewett, and most of the engravings and illustrations collected in that work have been utilized. Any that are original serve their purpose. The large plates are in every respect good.

The book is suitable for students, and for those who wish to have a good practical work on obstetrics, which takes up every necessary point in such a way that the reader can grasp one good method of procedure in each case, without wading through an endless sea of possible methods before coming to a decision.

A TEXT-BOOK OF HISTOLOGY AND MICROSCOPIC ANATOMY OF THE HUMAN BODY.

Including Microscopic Technique. By Dr. Ladislaus Szymonowicz, A. O., Professor of Histology and Embriology in the University of Lemberg. Translated and edited by John Bruce MacCallum, M.D., Johns Hopkins University, Baltimore. Illustrated with 277 engravings, including 57 plates in colours and monochrome. Lea Brothers & Co., Philadelphia and New York, 1902. Cloth, $4.75 net.

THIS translation of Szymonowicz's work is designed to place before the English speaking instructors and students, a text-book which includes the best results of recent investigations, and to present these results in such a form as to enable them to be mastered in the easiest and most rational manner. In order to attain this end, special stress has been laid upon the development of organs and histogenesis of the tissues; and the fact is brought out, that, in many of these organs and tissues, it is possible to recognise structural units, which are repeated in a definite way and bound together by a characteristic framework. Once this idea is grasped, the student has a method at his disposal which will carry him through the whole subject and simplify it immensely.

The first part of the book describes the cell, including cell division and fertilization, and then proceeds to take up the elementary tissues, beginning with epithelium and ending with blood and lymph.

The second part deals with the microscopic anatomy of the various organs, and although nothing essentially new is pointed out, yet all the more recent views are presented in a very acceptable manner. The description of the viscera is clear, and the diagrams representing their systems of circulation and secretion in three dimensions are very helpful. It is impossible in a short review to mention more than a few of the excellent points in the work, but special attention might be drawn to the treatment of the mouth cavity. Under this heading, adequate space is

given to the mucous membranes, tongue, and glands, but the part referring to the histology and development of the teeth, is worthy of particular mention, both on account of the excellence of the description and the beauty of the illustrations. The nervous system is well treated, as far as it goes, particularly in regard to the nerve endings, but a mistake is the omission of a satisfactory description of the minute anatomy of the medulla. Certainly the general anatomy of the part is described, but no sections are shown. Now this part of the nervous system has been the *bête noir* of many a student, besides being one which has to be mastered, and there is a great field for a text book giving a complete and lucid description of the medulla and pons, profusely illustrated with suitable plates.

Following the account of the nervous system, is a complete description of the eye, ear, and other special sense organs, a chapter being devoted to the study of the skin as a tactile organ.

The final part of the work deals with microscopic technique, and gives a concise account of the methods of preparing tissues for staining and mounting.

The book is well printed in large type and on good paper with numerous illustrations and plates, executed in the best style. No pains have been spared to make it attractive, and a study of the text increases the good impression conveyed by a hasty glance. It will undoubtedly become a very popular text book and can be thoroughly recommended to students and instructors.

CLINICAL METHODS.

A guide to the Practical Study of Medicine. By Robert Hutchison, M. D., M. R. C. P., Assistant Physician to the London Hospital, and to the Hospital for Sick Children, Great Ormond Street; and Harry Rainy, M. A., F.R.C.P. Ed., F.R.S.E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh; with upwards of 150 illustrations, and 8 colored plates. Fifth edition. Chicago: W. T. Keener & Co., 1902. Price, $2.50 net.

THIS book is what its name would lead one to expect it to be. It is in every sense of the word a clinical manual. The book begins with an excellent chapter on case taking. Then follows chapters on the various systems and organs. The chapters on urinary, blood, and bacterial examinations are particulary good. The illustrations are well selected, and aid materially in making the text clear. For the student, who has made good use of Drs. Hutchison and Rainy's "Clinical Methods," the bedside examinations will have no terrors. We can recommend the book as an ideal one for all students of medicine. It is of a pocket size, and, while it contains 600 pages, it is not thick and bulky. It is well bound and printed.

PHYSICAL DIAGNOSIS OF DISEASES OF THE THORACIC AND ABDOMINAL ORGANS, A MANUAL FOR STUDENTS AND PHYSICIANS.

By Egbert LeFevre, M.D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College; Attending Physician to Bellevue and St. Luke's Hospitals; Consulting Physician to Beth-Israel Hospital; Member of New York Academy of Medicine. Illustrated with 74 Engravings and 12 Monochrome Plates. Lea Brothers & Co., Philadelphia and New York, 1902.

This is a handsome 12 mo. volume of 450 pages. It is got up in a most attractive form. The paper, type, and binding are all that could be desired. The publishers are to be congratulated on the excellency of the radiograph plates, illustrating the normal and diseased conditions of the heart and lungs, and the bronchi filled with fine shot. The other illustrations are good and effective.

The subject matter of the book is divided into regional anatomy, the respiratory system, the circulatory system, the abdominal organs, and examination with x-rays. The section on regional anatomy is brief, but well stated and useful, especially to the student. In addition to the usual chapters on inspection, percussion, auscultation, and pulpation, there is much excellent advice in the diagnosis of diseases of the respiratory, circulatory, and abdominal organs.

The arrangement of the sections and subdivisions are such as to make the perusual of the book both easy and agreeable. While all portions of the work are exceptionally well written, we would specially mention that portion dealing with cardiac valvular diseases. The heart sounds, normal and abnormal, are often stumbling blocks to the student. Here we think they can have these matters cleared up perfectly.

SCUDDER'S TREATMENT OF FRACTURES.

Third Edition, Revised and Enlarged.

By Chas. L. Scudder, M. D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third Edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Polished Buckram, $4.50 net; Half Morocco, $5.50 net. Toronto: J. A. Carveth & Co.

THIS book is intended to serve as a guide to the practitioner and student in the treatment of fractures of bones, being a practical statement of the generally recognized methods of dealing with fractures. The attention of the student is diverted from theories to the actual conditions that exsist in fractured bones, and he is encouraged to determine for himself how to meet the conditions found in each individual case. Methods of treatment are described in minute detail, and the reader is

not only told, but is shown, how to apply apparatus, for as far as possible. all the details are illustrated. This elaborate and complete series of illustrations constitutes feature of the book. There are 645 of them, all from new and original drawings and reproduced in the highest style of art.

In this edition several new fractures have been described, and an excellent chapter on Gunshot Fractures of the long bones has been added. The reports of surgeons in the field during the recent wars have been carefully digested, and the important facts regarding fractures produced by the small caliber bullet have here been concisely presented. In many instances photographs have been substituted for drawings, and the uses of plaster-of-Paris as a splint material have been more fully illustrated. In its new form, the work fully maintains the deserved reputation already won.

From the artistic point of view, it would be impossible to imagine a more perfect book. The type is very clear, the illustrations are superior in every way, and the paper is of a very high quality. We can recommend this work most cordially to all who wish a work on fractures.

PUBLIC HEALTH AND PREVENTIVE MEDICINE.

By C. J. Lewis, M.D., D.Sc. (Public Health), Edin., Fellow of the Royal College of Physicians; Member of the Royal College of Surgeons; Lecturer on Public Health, Medical College for Women, Edinburgh; Examiner in Public Health, Royal College of Physicians, Edinburgh; Member of the Epidemiological Society of London; and Andrew Balfour, M. D., D. Sc., Edin., D. P. H., Camb., Fellow of the Royal Institute of Public Health; Member of the Epidemiological Society of London, Late Assistant Physician, City Hospital for Infectious Diseases, Edinburgh; and Civil Medical Officer, South African Field Force, Edinburgh; William Green and Son. 1902. Price 25 s.

IT is a great pleasure to be called upon to review such a volume as that of Drs. Lewis and Balfour; for it is both excellent in matter and superb in form. The publishers merit the highest praise for their enterprise in placing before their readers a work with so many features to commend it. We have here the acme of the book-maker's art. The work is a royal octavo one, of 658 pages, and well and attractively bound. The paper is of a superior quality, the type is clear, and the illustrations are most artistic in their execution and reproduction.

The colored plates will bear the closest and most critical inspection. As these plates deal with micro-organisms they are very valuable. In addition to the colored plates there are 189 figures throughout the text

The subject matter of the book is treated of under the headings of Medicine, General Sanitation, Sanitary Engineering and Building Construction, Vital Statistics, and Sanitary Administration and Sanitary Law

The first section considers the communicable diseases under the classes of the epizootic, the non-epizootic, and other communicable diseases; the parasitic diseases; occupational diseases; diseases of alimentation, such as deficient, excess, injurious, diseased and contaminated foods. The communicable diseases are described under the headings of geographical distribution, etiology, description, symptoms, differential diagnosis, method of transmission, prevention of origin and spread. The facts in all cases are tersely and clearly stated, from the latest and most reliable sources. The portions of the work dealing with occupational diseases and diseases of alimentation contain a great deal of very useful information. The remarks on their prevention are particularly important.

The section of the work on general sanitation is both exhaustive and accurate. It passes under review meteorology, climate, air, soil, water, food, beverages, clothing, exercises, bathing, sewage, infection, disinfection, quarantine, isolation, vaccination, school hygiene, disposal of dead, offensive trades, smoke prevention. With regard to the smoke nuisance the statement is made that the causes are want of proper construction and adjustment between fire places and boilers, the deficiency of draught and improper construction of the flues leading to a chimney, inadequate height and capacity, and the carelessness of stoking and management in those entrusted with the charge of the fireplaces and boilers. These evils can be corrected by the admission of sufficient air for complete combustion the intimate contact of the air with the fuel, and the mixture of air and fuel must be kept for a sufficient time at an incandescent temperature.

In the chapters on sanitary engineering and building there is much valuable information on the construction of houses, public buildings, and hospitals, the remarks on the disposal of sewage being of special interest. The question of vital statistics is taken up in a very thorough and instructive manner. The marriage, birth, and death-rates are given. In the case of the death-rate, a lot of facts are placed before the reader on the percentage occurring at the different ages, in the different occupations, and from the different diseases. The diseases most frequently encountered in the various trades, occupations, and professions are tabulated. The work closes with a careful summary of sanitary administration and law.

After a thorough perusal of the volume, we have no hesitation in recommending it, as one of the most valuable works on the subject of Public Health and Preventive Medicine extant with which we are acquainted.

MISCELLANEOUS.

VIRCHOW'S CELL DOCTRINE IN PRACTICAL MEDICINE.

VIRCHOW gave birth to a theory which determined itself into indisputable fact. In direct scientific application to principle Antiphlogistine was constructed. The immediate factor essential for success was the reduction of inflammation. The Antiphlogistine (Denver Chemical Co.) does through the physical process of osmosis. Relief from pain occurs on diminished pressure of the congested tissue. Through the admixture of bland antiseptics the chemical irritation of the nerve ends is neutralized. In every way, chemical, physical and medicinal, Antiphlogistine re-establishes the stability of cell life, by acting upon and dispersing the mass of extravasated fluid Absorption rapidly takes place through the relieved lymphatics. Antiphlogistine is a good medium to impart recuperative energy to the inflamed tissues.

SANMETTO IN GENITO-URINARY IRRITATIONS AND ATONIC SEXUAL CONDITIONS.

FLAVIUS J. KNIGHT, M. D., Charlotte, Mich., writes as follows :— I have used Sanmetto very extensively in my practice for years, and am daily more and more convinced of its intrinsic merit in all genito-urinary irritations and atonic sexual conditions. It is my sheet anchor in urethritis, cystitis and chronic prostatitis. I shall continue its use in cases where it is indicated, and also enlarge upon the field of its exhibition as circumstances may suggest.

THE PREVENTIVE AND CURATIVE TREATMENT OF HAY FEVER.

THERE is increasing evidence that Adrenalin (Parke, Davis, & Co.) fully meets the indications as a remedial agent in hay fever. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise so frequently a prominent feature in cases of long standing.

In the treatment of hay fever the Solution of Adrenalin Chloride should be used. This preparation is supplied in the strength of one part Adrenalin Chloride to one-thousand parts Normal Saline Solution, and is preserved by the addition of 0.5 per cent. Chloretone. The 1-1000 solution should be diluted by the addition of four parts Normal Salt Solution, and sprayed into the nares with a "Cocaine" atomizer. In the office, the 1-1000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened with a few drops of the solution, 1-1000.

FOUR HUNDRED DOLLAR PRIZE.

DR. J. B. MATTISON, Medical Director, Brooklyn Home for Narcotic Inebriates, offers a prize of 400 dollars for the best paper on the subject:

DOES THE HABITUAL SUBDERMIC USE OF MORPHIA CAUSE ORGANIC DISEASE? IF SO WHAT?

Contest to be open two years from December 1, 1901, to any physician, in any language.

Award to be determined by a Committee: Dr. T. D. Crothers, Hartford, Conn., Editor Journal of Inebriety, Chairman; Dr. J. M. Van Cott, Prof. of Pathology, Long Island College Hospital, Brooklyn; and Dr. Wharton Sinkler, Neurologist to the State Asylum for the Chronic Insane, Philadelphia.

All papers to be in the hands of the Chairman, by or before 1 December, 1903; to become the property of the American Association for the Study and Cure of Inebriety, and to be published in such journals as the Committee may select.

SURGICAL USES OF BOVININE.

DR. PRICE, of Richmond, Maine, attaches much value to Bovinine in the treatment of ulcers, lacerations, carbuncles, etc.

FERROLEUM.

IN addition to the manufacturing establishment, and offices in this country, the Ferroleum Company have established offices at 86 Clerkenwell, London, E. C. This combination of cod liver oil and tonics is finding increasing favor with the medical profession, as one of the most valuable of remedies in wasting diseases.

THE LATE J. MOORE HART, M.D.,
TORONTO.

THE LATE DUNCAN McLARTY, M.D.,
M.R.C.S., ENG., ST. THOMAS.

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WILLIAM BEAUMONT. A PIONEER AMERICAN PHYSIOLOGIST. *

PROFESSOR W. OSLER delivered an address before the St. Louis Medical Society, on the 4th October, and which appeared in the *J. A. M. A.* of November 15, on William Beaumont. The opening scene of the lecture is laid in the Island of Michilimacinac, on the morning of June 6, 1822. The contents of a shotgun were accidentally discharged into the body of Alexis St. Martin, at a distance of only two or three feet from its muzzle. Dr. Beaumont, who was at the time a surgeon in U. S. uniform, and in charge of old Fort Mackinac, came at once to attend the wounded Frenchman. The wound was just under the left breast, and supposed, at the time, to have been mortal. A large portion of the side was blown off, the ribs fractured and openings made into the cavities of the chest and abdomen, through which protruded portions of the lungs and stomach, much lacerated and burnt, exhibiting altogether an appalling and hopeless case. The diaphragm was lacerated and a perforation made directly into the stomach, through which food escaped. Shot, clothing and torn flesh were removed. With the utmost care, at the end of ten months the wound was partially healed, but he was still an object altogether miserable and helpless. It was then decided to transport him as a pauper to his place of nativity in Lower Canada. Dr. Beaumont believed St. Martin could not make the journey, and took him into his own house and cared for him at his own expense for nearly two years.

In the month of May, 1825, Beaumont began the experiments. He was ordered to Fort Niagara, where, taking the man with him, he continued the experiments. He took him with him to Burlington and Pittsburg. St. Martin returned to Canada in 1825. He married and had two children. Dr. Beaumont secured him again in 1829, and continued his observations till March, 1831 In 1832 and 1833 he again submitted to further series of experiments. In 1856 he was under the observation of Dr. Francis Gurney Smith, of Philadelphia, for a short

* Through the kindness of Professor W. Osler and Dr. Simmons, Editor of the Journal of the American Medical Association, we are able to furnish our readers with illustrations of Dr. Beaumont and Alexis St. Martin.

time. He died at St. Thomas, Quebec, in his 83rd year. He had often been jollied as "the man with a lid on his stomach." Professor Osler tried to secure an autopsy, but failed.

Dr. William Beaumont was born in the town of Lebanon, Conn., on the 21st day of November, 1785, and died in April, 1853, in St. Louis. He served with various U. S. regiments from 1812 to 1839, when he resigned his commission, settling down to practice in St. Louis, where he remained till the date of his death. He had an extensive and distinguished practice. He was a man of a most cheerful, but determined, disposition. The following is taken from a letter dated October 20, 1852, Domestic affairs are easy: peaceable and pleasant. Health of community good—no severe epidemic diseases prevalent—weather remarkably pleasant — business of all kinds increasing — product of the earth abundant — money plenty — railroads progressing with almost telegraphic speed. I expect to come to Plattsburg next summer all the way by rail." During his 27 years in the American army, he saw much active service, specially in the war of 1812-1813. In March, 1853, he met with an accident —a fall while descending some steps. A few weeks later a carbuncle appeared on his neck, and proved fatal.

WILLIAM BEAUMONT, M.D.

His book on "Experiments and Observations on the Gastric Juice and the Physiology of Digestion," was published in 1833; and a second edition, under the supervision of his cousin, Dr. Samuel Beaumont, was published in 1847. In 1838, Dr. Andrew Combe issued an edition in Scotland with numerous notes and comments.

"There had been other instances of artificial gastric fistula in man which had been made the subject of experimental study, but the case of

St. Martin stands out from all others on account of the ability and care with which the experiments were conducted. As Dr. Combe says, the value of these experiments consists partly in the admirable opportunities for observation which Beaumont enjoyed, and partly in the candid and truth-seeking spirit in which all his inquiries seem to have been conducted. "It would be difficult to point out any observer who excels him in devotion to truth and freedom from the trammels of theory or prejudice. He tells plainly what he saw and leaves everyone to draw his own inferences, or where he lays down conclusions he does so with a degree of modesty and fairness of which few perhaps in his circumstances would have been capable."

ALEXIS ST. MARTIN.

To appreciate the value of Beaumont's studies it is necessary to refer for a few moments to our knowledge of the physiology of digestion in the year 1832, the date of the publication. Take, for example, "The Work on Human Physiology" (published in the very year of the appearance of Beaumont's book), by Dunglison, a man of wide learning and thoroughly informed in the literature of the subject. The five or six old theories of stomach digestion, concoction, putrefaction, trituration, fermentation and maceration,

are all discussed, and Wm. Hunter's pithy remark is quoted, "some physiologists will have it that the stomach is a mill, others, that it is a fermenting vat, others, again, that it is a stew-pan; but, in my view of the matter, it is neither a mill, a fermenting vat nor a stew-pan; but a stomach, gentlemen, a stomach."

The theory of chemical solution is accepted. This had been placed on a sound basis by the experiments of Reaumur, Spallanzani and Stevens, while the studies of Tiedemann and Gmelin and of Prout had done much to solve the problems of the chemistry of the juice. But very much uncertainty existed as to the phenomena occurring during digestion in the stomach, the precise mode of action of the juice, the nature of the juice itself and its action outside the body. On all these points the observations of Beaumont brought clearness and light where there had been previously the greatest obscurity.

The following may be regarded as the most important of the results of Beaumont's observations: First, the accuracy and completeness of description of the gastric juice itself. You will all recognize the following quotation, which has entered into the text-books and passes current to-day. "Pure gastric juice, when taken directly out of the stomach of a healthy adult, unmixed with any other fluid, save a portion of the mucus of the stomach with which it is most commonly and perhaps always combined, is a clear, transparent fluid; inodorus; a little saltish, and very perceptibly acid. Its taste, when applied to the tongue, is similar to this mucilaginous water slightly acidulated with muriatic acid. It is readily diffusible in water, wine or spirits; slightly effervesces with alkalies; and is an effectual solvent of the *materia alimentaria*. It possesses the property of coagulating albumen, in an eminent degree; is powerfully antiseptic, checking the putrefaction of meat; and effectually restorative of healthy action, when applied to old, foetid sores and foul, ulcerating surfaces."

Secondly, the confirmation of the observation of Prout that the important acid of the gastric juice was the muriatic or hydrochloric. An analysis of St. Martin's gastric juice were made by Dunglison, at that time a professor in the University of Virginia, and by Benjamin Silliman of Yale, both of whom determined the presence of free hydrochloric acid. A specimen was sent to the distinguished Swedish chemist, Berzelius, whose report did not arrive in time to be included in the work. In a letter dated July 19, 1834, he writes to Professor Silliman that he had not been able to make a satisfactory analysis of the juice. The letter is published in *Silliman's Journal*, Vol. 27, July, 1835.

Thirdly, the recognition of the fact that the essential elements of the gastric juice and the mucus were separate secretions.

Fourthly, the establishment by direct observation of the profound influence on the secretion of the gastric juice and on digestion of mental disturbances.

Fifthly, a more accurate and fuller comparative study of the digestion in the stomach with digestion outside the body, confirming in a most elaborate series of experiments the older observations of Spallanzani and Stevens.

Sixthly, the refutation of many erroneous opinions relating to gastric digestion and the establishment of a number of minor points of great importance, such as, for instance, the rapid disappearance of water from the stomach through the pylorus, a point brought out by recent experiments, but insisted on and amply proven by Beaumont.

Seventhly, the first comprehensive and thorough study of the motions of the stomach, observations on which, indeed, are based the most of our present knowledge.

And lastly, a study of the digestibility of different articles of diet in the stomach, which remains to-day one of the most important contributions ever made to practical dietetics.

The greater rapidity with which solid food is digested, the injurious effects on the stomach of tea and coffee, when taken in excess, the pernicious influence of alcoholic drinks on the digestion, are constantly referred to. An all-important practical point insisted on by Beaumont needs emphatic reiteration to this generation: "The system requires much less than is generally supplied to it. The stomach disposes of a definite quantity. If more be taken than the actual wants of the economy require, the residue remains in the stomach and becomes a source of irritation and produces a consequent aberration of function, or passes into the lower bowel in an undigested state and extends to them its deleterious influence. Dyspepsia is oftener the effect of over-eating and over-drinking than of any other cause."

One is much impressed, too, in going over the experiments, to note with what modesty Beaumont refers to his own work. He speaks of himself as a humble "enquirer after truth and a simple experimenter." "Honest objection, no doubt, are entertained against the doctrine of digestion by the gastric juice. That they are so entertained by these gentlemen I have no doubt. And I cheerfully concede to them the merit of great ingenuity, talents and learning, in raising objections to the commonly received hypothesis, as well as ability in maintaining their peculiar opinions. But we ought not to allow ourselves to be seduced by the ingenuity of argument or the blandishments of style. Truth, like beauty, when 'unadorned is adorned the most'; and in prosecuting

these experiments and inquiries, I believe I have been guided by its light. Facts are more persuasive than arguments, however ingeniously made, and by their eloquence I hope I have been able to plead for the support and maintenance of those doctrines which have had for their advocates such men as Sydenham, Hunter, Spallanzani, Richerand, Abernethy, Broussais, Philip, Paris, Bostock, the Heidelburg and Paris professors, Dunglison, and a host of other luminaries in the science of physiology."

In reality Beaumont anticipated some of the most recent studies in the physiology of digestion Doubtless many of you have heard of Professor Pawlow's, of St. Petersburg, new work on the subject. It has been translated into German, and I see that an English edition is advertised. He has studied the gastric juice in an isolated pouch, ingeniously made at the fundus of the stomach of the dog, from which the juice could be obtained in a pure state. One of his results is the very first announced by Beaumont and confirmed by scores of observations on St. Martin, viz., that, as he says, "the gastric juice never appears to be accumulated in the cavity of the stomach while fasting." Pawlow has shown very clearly that there is a relation between the amount of food taken and the amount of gastric juice secreted. Beaumont came to the same conclusion: "when aliment is received the juice is given in exact proportion to its requirements for solution." A third point on which Pawlow lays stress is the curve of secretion of the gastric juice, the manner in which it is poured out during digestion. The greatest secretion, he has shown, takes place in the earlier hours. On this point hear Beaumont: "It (the gastric juice) then begins to exude from the proper vessels and increases in proportion to the quantity of aliment naturally required and received." And again: "When a due and moderate supply of food has been received it is probable that the whole quantity of gastric juice for its complete solution is secreted and mixed with it in a short time." A fourth point, worked out beautifully by Pawlow, is the adaptation of the juice to the nature of the food, on which I do not see any reference by Beaumont, but there are no experiments more full than those in which he deals with the influence of exercise, weather and the emotions on the quantity of the juice secreted."

SURGICAL TREATMENT OF GALLSTONES.*

J. F. W. ROSS, M. D., C. M.
Associate Professor of Gynaecology, Medical Faculty, University of Toronto.

THE treatment of gallstones can be divided into medical and surgical. For many years the medical treatment prevailed and the greater benefits to be obtained by surgical treatment were not duly appreciated. Owing to the great advances made in surgery the tables have been turned and the sufferers from gallstones obtain a much greater measure of relief. I know but little of the so-called medical treatment of gallstones, and I am very skeptical as to its practical value.

DANGERS INCURRED BY PATIENTS SUFFERING FROM GALLSTONES.

Not only is there a danger of sudden death from the passage of a gallstone, but there are many other dangers to be encountered. There is the great danger of gangrene of the gall bladder (closely resembling gangrene of the vermiform appendix), with rupture and death or with the formation of a secondary abcess ; there is the danger of inflammation with empyema of the gall bladder, accompanied by chills, high fever and the occurence of a suppurative pylephlebitis followed by death. There is the danger that septic infection may travel from some ulcer, produced by gallstone irritation of the mucous membrane of the gall bladder or ducts, to the vessels of the liver. Even when no pus is to be found, either in the gall bladder or gall ducts, these septic conditions may spread beyond the confines of the gall bladder and produce inflammation of the peritoneum and surrounding structures. Abscesses may form external to the gall bladder and may perforate in various directions, upwards to the right pleural cavity, forwards through the skin, or backwards into the posterior hepatic pouch. These are grave conditions, and, if they do not terminate fatally, the patient is liable to be ill for many weeks.

I have seen one patient die from shock, produced by the passage of a gallstone through the common bile duct, and, a few years ago, I saw a gallstone that was presented to one of our medical societies after it had been removed postmortem from the common bile duct of a patient who died suddenly from shock during its attempted passage. Many other cases of death from this cause have been reported. Obstruction of the common bile duct by stone frequently occurs in patients advanced in years, so that this serious complication must be considered as a constant menace to those who are suffering from cholelithiasis.

*Read before the Canadian Medical Association, 17th September, 1902.

A few weeks ago I removed a gallstone from the common bile duct of a woman, aged 65, who was suffering for the first time from continued jaundice and who did not know that she was troubled with gallstones, though 147 were removed from the gall bladder. A more frequent resort to surgical treatment would prevent the occurrence of this serious condition in elderly people, and would also prevent that slow and living death that is to be looked forward to by many of these sufferers. They begin to have fever and chills and intermittent attacks of jaundice with impairment of the appetite and a loss of strength. The excessive use of opiates and alcoholic stimulants makes them still more miserable until death finally ends the scene.

A patient suffering from gallstones may, at any moment, become seriously ill and the surgeon will find himself face to face with as great a responsibility as if he was dealing with a case of acute appendicitis. At any time these patients may have a violent outbreak of a rapidly fatal cholecystitis with cholangitis. Repeated inflammations may produce such a condition of chronic inflammatory exudate as to prevent the surgeon from carrying out surgical measures for their relief. When brought face to face with these serious complications our responsibilities are increased.

General Considerations.

In discussing the surgery of the region occupied by gallstones we must consider the organs with which we have to deal. Stones may find a lodgment in the ducts throughout any part of their course, or in the gall bladder, or in both. When removing these stones we are called on to open hollow organs that are liable to leak, to peel away tissues from a solid organ that is liable to bleed, and to readily absorb septic material, and we are called on to open ducts that are lying in close proximity to blood vessels that may be injured. The leakage of bile from open ducts and from an open gall bladder was to be feared before attention was drawn by Morison to the post-hepatic pouch and to the safety of gauze drainage by my friend, Dr. W. E. B. Davis, Birmingham, Ala., after he had demonstrated its usefulness in many experiments on dogs.

Morison's pouch should be used for drainage in all cases in which post-operative leakage is liable to occur. The method I have adopted is to institute through-and-through drainage by means of a piece of rubber tubing entering through the wound in front and emerging through a counter opening at the deepest part of this pouch. Not only should a rubber drainage tube be used, but iodoform gauze packing should be placed over the leaking point or points to still further assist the tube. With a due attention to this matter many of the operations for the

removal of gallstones are robbed of their terrors and patients who formerly would have died can now be carried safely through.

Owing to the introduction of this method of drainage it is no longer necessary to break up calculi by the needling process, or to open the intestine for the purpose of removing a stone from the common duct, and why? Because we no longer are afraid to make a direct incision over the stone into even the most friable duct. Then if necessary, we can readily break up the stone by means of gallstone forceps passed through the opening.

Cholecystostomy.

Gallstones are found most frequently in the gall bladder. They are sometimes formed with great rapidity. Among my collection I have several thousand taken from the gall bladder of one patient.

Case 1.—In February, 1897, he had his first attack. Cholecystostomy was performed, a fistulous opening remained, and this was closed by two sutures. In November, 1897, he again had colic and jaundice; in March, 1898, Dr. Tiffany of Baltimore operated on him. He found no stones. In June, 1898, he was still in the hospital suffering from attacks of colic and transient jaundice. The gall bladder was again opened, but no stones were found. July 3, he suffered from a blow on the head for which a portion of the skull was elevated. In August, 1899, his colicky pains returned. October 1, he had colic for four days and was then jaundiced for two months. In November, he was operated on again, for the fourth time, a black tarry fluid and one gallstone, soft and black and of the size of a cherry pit, were found in the gall bladder. A cholecystenterostomy was then performed and anastomosis with the colon completed. At last reports the button had not passed. The subsequent progress of the case is unknown to me. The gallstones in this case were like grains of gunpowder, and it was not to be expected that operative procedures would give much relief.

But this is an exceptional case, and it is a well-known fact that a simple cholecystostomy in a large majority of cases gives complete relief, the larger the stone, or stones, the greater the freedom from recurrences; the smaller the stones, the greater the liability for recurrences.

Gangrene of the Gall Bladder.

While it is a well-known fact that gallstones may lie in the gall bladder for years without giving rise to trouble, it is also well known that they will frequently produce a condition of inflammation of the gall bladder that may even suddenly eventuate in gangrene. I have met two cases of gangrene of the gall bladder.

CASE 2.—Dr. R., aged 62, was taken suddenly ill with severe pain in the abdomen. The bowels moved after the administration of a purgative. Temperature and pulse were elevated. Nausea. Some few years before he had had a severe attack of what was supposed to be typhoid fever, after which he suffered from terrible pains that were supposed to be due to indigestion. On examination of the abdomen fulness was felt below the edge of the liver. There was no rigidity of the right rectus muscle. Notwithstanding this fact the case was diagnosed as one of appendicitis. On opening the abdomen the appendix was found to be healthy. On looking further up a gangrenous gall bladder was seen snugly placed among inflamed intestines and omentum. The incision was enlarged, these adhesions were broken down readily, the gall bladder was opened and drained. The fluid evacuated was muco-purulent. Five gallstones were removed, one of them obstructing the cystic duct. A long glass drainage tube was placed to the bottom of Morison's pouch. Patient made an uninterrupted recovery.

CASE 3.—Mrs. W., who had a baby a month old, was taken suddenly ill early in the morning with severe pain in the abdomen. Her physician, Dr. T. B. Richardson, was sent for and he found her in great agony, and immediately administered a large dose of morphia. He was afraid that she would scarcely survive. Pulse was rapid and thready and the patient looked very ill. Improvement took place, but, later in the day, the pulse began to fail and he was again alarmed at her condition. I was sent for, but as I was out of town he decided to wait until the next day. In the morning the patient had somewhat improved. The temperature still remained high, having risen to 104 at the onset of the illness. She complained of one tender spot beneath the edge of the liver over the region of the gall bladder. There was slight puffing of the abdomen and vomiting. When I saw the patient the pulse was rapid and she was profoundly septic. A hard, tender, resistent spot could be made out over the region of the gall bladder, and I concluded that this must be another case of gangrene of the gall bladder. In order to share the responsibility I asked for another consultant before proceeding to operate. Very little hope was held out of the patient's recovery even with operation, owing to the septic condition. The abdomen was opened, and on the tense gall bladder was found, a large, green, grangrenous patch involving at least one-third of its entire surface. The gall bladder contents were evacuated. The parts were too friable, swollen, and thickened to permit of removal and on this account through-and-through drainage was established and the gall bladder area was packed off from the rest of the abdominal cavity by means of a large packing of iodoform gauze. During

the convalescence it was necessary to again administer chloroform to remove the gauze, but the patient made an uninterrupted recovery. During the hurried manipulations, hurried owing to the patient's collapsed condition, no gallstone could be found.

It should be remembered that as the tender spot, an inch and one-half from the anterior superior spine of the ilium towards the umbilicus, points to appendicitis, so the tender spot an inch and one-half to the right and one inch and one-half above the umbilicus points to cholecystitis. Cholecystostomy was performed for the relief of this condition and was accompanied in the one case by gauze drainage and in the other by tube drainage with recovery in each. Gallstones do not necessarily produce such severe inflammation as to lead to gangrene.

Empyema of the Gall Bladder with Gallstones.

The next condition of which I wish to speak is that of empyema of the gall bladder. Inflammation has taken place and pus has been formed. The patient may be very ill in the acute septic condition, or may be in fair health while the gall bladder may be filled with pus that is almost sterile, as it is found to be in other situations in which it has been retained for a considerable time.

It has been stated that it is necessary and wise in this condition, as well as in that of gangrene of the bladder, to remove the entire organ. I consider that this is too sweeping an assertion. It is not necessary to remove the gall bladder in cases in which it is inflamed and septic and thickened from chronic inflammation and filled with pus. After it has been drained for a time and the offending calculi have been removed, the organ soon resumes its normal condition. I have considered it advisable, under such circumstances, to carry out intermittent irrigation of the organ by means of a small catheter placed in the gall bladder and attached to a douche tin. It is, as a rule, easy to fasten such a gall bladder to the abdominal wall owing to the fact that it has been considerably distended. Suppuration may be found in a gall bladder containing a few or many stones and with or without complete obstruction of the cystic duct.

Chronic Inflammation of the Gall Bladder containing Calculi but not Pus.

In these cases it is usual to find the gall bladder thickened, adherent, contracted, and sometimes sacculated. There is evidence that the patient has suffered from many attacks of inflammation. The operation of cholecystostomy may be a very difficult one to perform, under the circumstances. If such a gall bladder is put on the stretch and fastened to the

edges of the parietal incision it is liable to tear away. If stitched up and dropped back after the stones have been removed, the stitches are liable to tear out and permit of leakage, as it frequently happens that there is a partial obstruction to the flow of bile through the common duct. The operation of cholecystectomy, under the circumstances, would be a very difficult procedure. If saccules are present it may be necessary to incise them individually and remove their contents and then to close the opening in a "sort of a way." Such closures can not be depended on to be water tight. I have treated such cases by passing a drainage tube into the gall bladder and stitching the opening in the gall bladder firmly around the outer wall of the tube. None of the stitches go through the tube. Gauze packing is then placed around the tube and another drain is either put into the bottom of Morison's pouch or carried through a counter opening at its lowest point. The gauze is removed about the fifth day and the tube in the gall bladder is removed about the same time. If a counter opening has been made in the flank this is not allowed to close for a couple of weeks. These cases may be very successfully dealt with in this manner.

Cholecystectomy.

When a stone becomes blocked in the cystic duct, the bile remaining in the gall bladder is decolorized after a time, and nothing will then be left but a clear mucoid fluid. The gall bladder may become thinner and may remain freely movable below the costal margin on the right side. While in this condition it may be so over-distended at any time as to become gangrenous, the gangrene usually beginning at its tip.

I operated on one such case where a sudden onset of pain and a tenderness on pressure over the gall bladder drew attention to the urgency of the condition. At the operation a very small gangrenous area could be made out at the end of the over-distended gall bladder. It is therefore advisable that all such cases should be operated on and the patient relieved from this source of danger.

The operation that should be performed, under the circumstances, is cholecystectomy; the entire gall bladder should be removed. This procedure can be carried out without difficulty. The tissues attached to the liver may be raised up with forceps and the finger can then be thrust into the layers of cellular tissue. Scissors will be required to cut through the peritoneum where it is dense. There is no hemorrhage to alarm the operator. The gall bladder is peeled off from the liver until the stone is reached; the duct is then further isolated beyond the stone and tied off with a fine silk ligature. Supporting sutures are placed

over the end of the duct to bring peritoneum to peritoneum and act as an additional safeguard against a leak. It is wise to place a small strip of iodoform gauze down from the abdominal wound to the end of the cystic duct. Unless the operation of cholecystectomy is performed for this condition a mucous fistula may persist, and this may require a second operation for its relief. This secondary operation is a difficult one to perform owing to the fact that strong adhesions are now present. I met with these difficulties in one case, and for a few days after the operation despaired of the patient's life.

All operators seem to be agreed that it is wise to perform the operation of cholecystectomy in all cases in which we have a much distended and atrophied gall bladder with an occluded cystic duct. On one occasion I left three stones lying side by side in the cystic duct after having removed a large number from the gall bladder by cholecystostomy. The stones passed on without difficulty and the patient made an uninterrupted recovery. At the present time I would not allow the patient to run any such risk, but would remove the gall bladder and the cystic duct with the stones *in situ*. It was interesting to note in this case that when one stone had entered the duct other smaller stones followed.

I removed a gall bladder two weeks ago with the stone in the cystic duct. The undilated duct could be seen beyond the stone. After looking at the enormous distension it was easy to understand how stricture of the duct may be produced after the removal of the foreign body. The patient from whom this was removed made an easy recovery and the operation only consumed a few minutes.

The other indications for cholecystectomy are at present being discussed by the surgical world. Many surgeons consider that the gall bladder should always be removed for the conditions above mentioned, namely, gangrene of the gall bladder. empyema of the gall bladder, chronic inflammation and thickening of the gall bladder with or without contraction, and for cystic enlargement of the gall bladder. Others consider that this is too radical a procedure, that it is not necessary nor advisable, and that it is undoubtedly accompanied by a greater mortality than the operation of cholecystostomy. I feel satisfied that there is a danger that the pendulum may again swing, as it ever swings in the surgical world, too far toward the radical side, but to come back again, no doubt in the course of time.

Let us for an instant consider the two analogous conditions, gangrene of the gall bladder with one or more stones in its interior, and gangrene of the vermiform appendix with one or more coproliths in its interior. Do

we consider that it is always wise to remove a gangrenous appendix? Certainly not. There are times when we consider it wiser and safer to make our incision, to institute drainage and endeavor to isolate, with protecting gauze, the infected area. To dig down into and stir about these septic, infiltrated structures, under certain circumstances is not good surgery. This same applies to the treatment of gangrenous conditions of the gall bladder. If, however, the organ can be readily removed and the tissues are not too friable to hold ligatures, it may be advisable to remove the offending organ, but, in my experience with two cases, the patient has not been in any condition to undergo such a prolonged operation.

Cholecystectomy does not produce a more radical cure than cholecystostomy. Even after cholecystectomy has been performed gallstones may form in the ducts in the liver itself and may be passed onward through them into the intestines. Owing to the fact that there is no cholecystitis to be encountered they are not large. I have seen, on one occasion, gallstones of medium size lying in a row in the hepatic duct above the junction of the hepatic and cystic ducts.

Langenbeck has denied that obstruction can result from stones forming in the biliary ducts outside of the gall bladder, but, as I have just said, I have seen such obstruction. The smallest stone in the row was nearest the liver. I was able to milk the stones down the hepatic duct and up from the common duct through the cystic duct into the gall bladder. The gall bladder had been opened and the gallstones were all removed in this manner.

The gall bladder is not known to be of any particular value and many animals are able to get along without it. It is occasionally found wanting in the human species. It has been said that the hemorrhagic conditions of the mucous membrane of the gall bladder that is likely to occur as a post-operative complication after removal of gallstones, may be done away with by removal of the organ at the time of operation. Such hemorrhagic conditions are, however, rare. I have met with but one case, and at the postmortem examination it was found that the blood had come from a ruptured vessel in the liver, and, therefore, cholecystectomy would not have prevented death.

It has been stated as further argument in favor of cholecystectomy that by the removal of the gall bladder there is no danger of a recurrence of the cholecystitis, the disturbing element. I have not seen such disturbance occur after simple cholecystostomy and drainage if the stones have been thoroughly removed. It may always be desirable to remove the gall bladder for all the diseases to which it is liable, but the question o be answered is, is it always wise to do so?

In the presence of obstructive jaundice the operation of cholecystectomy is not advisable. The common duct being already obstructed it is desirable either to remove the stone and rely on the future patency of the duct for the relief of the patient, or to remove the stone and anastomose the gall bladder to the intestine, or to leave the stone in situ and perform cholecystenterostomy. It must be more difficult to anastomose the common duct itself than to anastomose the gall bladder to the intestine.

It has been stated that cholecystectomy should be considered as a curative operation, as it removes the cause of the disease. From what I have already stated I am satisfied that this is not so. Having seen large stones in the hepatic duct and in abscesses of the liver I am convinced that quite large stones may form outside of the gall bladder. There must, therefore, still be a danger of obstruction of the ducts even after the gall bladder has been removed. It would be interesting to ascertain whether the animals possessing no gall bladder suffer from gallstones.

A great deal has been said regarding the fistulæ that are left after cholecystostomy. They are not comfortable, but are undoubtedly curative, and, in the large majority of cases, they close without trouble. The only fistula that is troublesome is mucous fistula, and, as we have already decided that the gall bladder should be removed in the cases in which the mucous fistula is liable to form, this difficulty is done away with. The fistula that forms owing to the fact that the common duct is still obstructed is a useful one, for without it the patient must undoubtedly continue to suffer from jaundice, and if it persists after having fulfilled its offices it may be done away with by making an anastomosis when the patient is in a greatly improved condition. So that we see the discomfiture to the surgeon and the discomfort of the patient have been blessings in disguise.

The formation of the fistulæ teaches us that we should not use a large drainage tube for the purpose of draining the gall bladder. In this way the gall bladder opening can be reduced in size and the opening will close more quickly. Any suture used to fasten the gall bladder to the skin or the abdominal wound should be a continuous one, if non-absorbable, and it should be removed in a few days after operation. The drainage tube should be removed early except in cases of empyema of the gall bladder.

The argument that is used for the removal of the gall bladder in all cases owing to the fact that cancer is liable to supervene on gallstone irritation, is not based on a sure foundation. The surgeon does not propose to leave gallstones in the gall bladder to give rise to the irritation

that is to lead up to the cancer, so that with or without a gall bladder this danger will be done away with.

The flow of bile into the gall bladder is greatest at night. It has never been demonstrated that patients from whom the gall bladder has been removed suffer in the slightest degree as a consequence of this fact.

Cholecystenterostomy.

The operation of cholecystenterostomy can be performed by means of the elastic ligature or the Murphy button. I have used both and prefer the button. When the button is used care must be taken to allow long threads to float from the portion of the button placed in the intestine into the lumen of the gut. These silk threads become entangled in the fecal matter and the slight extra traction that is exerted has a tendency to draw the button toward the intestine and away from the gall bladder. I used the smallest sized Murphy button that I could buy and then had some very small ones, that I show here, made to order by Truax, Greene & Co. These have been used with perfect satisfaction to myself and to the patients.

After the bile has been diverted through the new channel the concretion impacted in the common duct grows smaller and disintegrates. I believe that it is quite possible that it may entirely disappear and that the bile may again proceed to the normal channel. The reverse of this is the case so long as the bile is passing by the impacted calculus, owing to the fact that more bilirubin calcium is being precipitated on its surface until it may increase to a very great extent.

Choledocholithectomy.

We have considered the treatment of stones in the gall bladder and in the cystic duct. We have now to turn our attention to the treatment of gallstones in the common or hepatic ducts. It is seldom that stones are met with in the hepatic duct. When they are met with they must be removed by pressing them down into the common duct, from which they may be removed by forcing them back through the cystic duct into the gall bladder, or they must be removed by direct incision When a stone is lodged in the common duct it will be accompanied by an intermittent jaundice or a jaundice of varying intensity. The patient may be very deeply jaundiced for a great length of time.

The operation for the removal of the stone is in some cases fraught with such risk to the life and difficulty to the surgeon that it may be advisable to adopt another measure for the relief of the patient. An anastomosis between the gall bladder and intestine may be established. The colon is the portion of the bowel that can be most readily approxi-

mated to the gall bladder. Before this operation was carried out it was supposed that it was not advisable or, in other words, that the small intestine should be used instead. I have found that the patients do not have diarrhea as a consequence of the pouring of the bile into the large intestine or any digestive disturbances. When the small intestine is used it must be either drawn up over the colon or taken through the folds of its mesentery. I have anastomosed the gall bladder to the large intestine on several occassions with the most perfect results.

Owing to the advances that have been made in gall bladder surgery cholecystenterostomy stands to-day in a different position. We can now incise ducts with impunity that can not, owing to their friability, be stitched, owing to the fact that we understand the safety given by careful and thorough drainage. The operation of cholecystenterostomy must now be regarded as rather a makeshift, only to be used when a patient is in a very bad condition.

On one occasion, when operating on a young woman, I found that she already had an anastomotic opening between the gall bladder and intestine that had been produced by the bursting of an inflamed gall bladder into the bowel.

It has been stated that the relations of the hepatic artery, the portal vein and the common duct may be changed and one of the vessels may run across the duct. If the positions of these important structures are altered the removal of a stone from the common bile duct is surrounded by a new and terrible danger. The condition might be detected during operation by a careful preliminary examination of the parts. Even when the structures are normally placed the operation is a difficult one. Much assistance can be attained by a forceps that I have had made by Stevens & Sons of Toronto. It is intended to replace the fingers of the left hand, to grasp the duct containing the stone and to draw it forwards to be within easier reach and away from the important structures beneath it.

The difficulty of the operation varies with the construction of the patient. It is more difficult to perform the operation on a patient with deep ribs than on one with short ribs. In all cases a large sandbag placed under the back and the transverse oblique incision should be employed, taking care to keep the incision well down below the hepatic margin. The liver can then be pulled upwards and the stomach inwards and downwards and the colon downwards so that the field of operation may be brought well into view. It is always advisable to pack in sponges to drag down the stomach and intestines and to protect the general peritoneal cavity from infection. I find that this dragging down of the stomach is of great assistance.

If the forceps I have mentioned are not used the duct must be held forwards with the thumb and index finger or the first two fingers of the left hand. With the duct held down either by the fingers or the rollers of the forceps the operator must decide on the length of the incision into the duct that will be necessary for the removal of a stone. A large stone may be crushed and the debris can be removed with a small scoop. When the length of the incision into the duct has been decided on a purse-string suture should be placed beyond its limits, the incision must then be made in the centre of the oval formed by the running suture. The stone having been removed and a probe having been passed through the common duct into the intestine the purse-string suture is drawn and tied and any further escape of bile over the field of operation is prevented. A supporting row of mattress sutures should now be placed to more securely close the opening into the duct. Before closing the abdomen it will be wise to place a small gauze drain down to the duct and to drain Morison's pouch by a single drainage tube from the front or by through-and-through drainage.

As I have said before, the intestine should not be opened for the purpose of removing a stone from the common bile duct. Such a procedure is not necessary according to the light of our more recent experience. It may happen that a malignant growth, a so-called cylindroma, obstructing the common bile duct is mistaken for an impacted gallstone. I have met with such a case in my own practice and have seen two similar cases in the practice of others. Under such circumstances the jaundice usually comes on suddenly without pain; it may be intermittent. A rounded mass will be felt after the abdomen has been opened that can only be differentiated from stone by means of a needle passed through the wall of the duct into the mass, or by means of the passage of a probe or a pair of forceps through an incision into the duct. Owing to its gritty nature a gallstone can be easily distinguished from a neoplasm. These growths are always rounded and not faceted and frequently move back and forth in the duct through a small space.

It is scarcely necessary for me to enter into a description of more than general details of these operations to such an audience. We all know that these operations can not be carried out successfully unless proper precautions are taken to prevent contamination of the peritoneal cavity. Sponges, absolutely sterile and plenty of them, must be made use of so that during the performance of the work all the intestines, except a portion of the colon and the stomach, are kept out of view. Sponges soiled with bile or gall-bladder mucus must be discarded and not used again during the performance of the operation.

And now, in conclusion, let me say that there are two great surgical principles involved in this work: firstly, thorough asepsis and thorough protection against the infection of any of the surrounding tissues; and, secondly, thorough and efficient drainage. If these two principles are kept in mind the operator can sacrifice thoroughness in his work for the sake of the benefit of haste to his patient. Many of these patients do not withstand the shock of a prolonged operation and the length of time occupied is of great importance. In the pelvis we have been endeavoring to do away with drainage while in this region we provide the most thorough drainage. The conditions are different.

CASES EXHIBITED AT THE SURGICAL DEMONSTRATION IN THE ROYAL VICTORIA HOSPITAL ON THURSDAY, SEPT. 18th, 1902, BEFORE THE MEMBERS OF THE CANADIAN MEDICAL ASSOCIATION.

By JAMES BELL, M.D.

Professor of Clinical Surgery, McGill Medical Faculty

PATIENT aet. 68 years, larynx had been removed on the 5th of March, 1900, and he is now in perfect health and showing no signs of recurrence, although at the time of the operation the pathological examination of the part removed seemed to show that a portion of the disease had been left behind in the tissues of the neck.

This patient had begun to suffer from hoarseness and difficulty in breathing in the autumn of 1899 and an emergency tracheotomy had been done on the 1st of January, 1900. He was admitted to the Hospital on the 25th day of February with threatened asphyxia from encroachment of the disease upon the tracheal opening and much infiltration of the tissues of the neck. The operation had been done at his urgent solicitation in order to avert asphyxia and with no hope that a permanent cure could be effected. He can now make himself understood fairly well by a form of speech although there is no communication between the air passages and the pharynx.

2. Patient, aet. 45, had been admitted to the Hospital on the 11th of September, 1901, with recurrent sarcoma which had originated in the spine of the right scapula. It had been twice removed before his coming to the Hospital.

On the 18th of November, 1901, the whole extremity was removed by an intra-scapulo-thoracic amputation. The patient made an excellent recovery and is still quite well.

3. A girl, aet. 18, had received a blow upon the right shoulder in August 1901, by a heavy swinging door. The shoulder was swollen and painful for a week. On the first of February 1902 she slipped on the ice and fell hurting her shoulder again; pain and swelling followed, the swelling subsided in ten days but the pain persisted. Enlargement of the shoulder was first noticed March 1st.

She was admitted on the 23rd of April and the extremity removed by an intra-scapulo-thoracic amputation on the 8th of May. On the 18th she contracted measles, and on the 10th of June was returned to the surgical ward and was discharged on the 14th with the wound quite healed and no evidence of recurrence of the disease. The day after her return home she began to suffer from pain in her side and on the 27th of June she died from sarcoma of the pleura.

4. A man, aet. 38, had had a mole on the top of the right shoulder over the spine of the scapula, from childhood. In February, 1902, it began to enlarge and in May it had reached the size of a walnut and was removed. About the first of July he noticed enlargement of the gland in the axilla and was admitted on the 28th of July when spots of melanotic epithelioma were found in the cicatrix and surrounding skin for a considerable area, with very great enlargement of the axillary glands and great swelling about the shoulder joint.

He suffered extremely and amputation was undertaken for the relief of pain rather than with any hope of affecting a cure. Intra-scapulo-thoracic amputation was done on the 18th of August a very large area of skin removed and the patient is now quite well with the exception of a granulating area which had been left uncovered by skin. He is now being treated by X-ray method as a prophylactic against recurrence.

The organs were shewn of,

1. A man aet. 55, who had died of chronic glanders. He was a farmer and had had glanders among his horses for three years and finally had them shot. The disease dated back to November, 1900, and he died on the 1st of September, 1902. The lesions had been intermittent and acute and generally in the lymphatic glands or subcutaneous with the exception of the lesion of the cranium in the occipital lesion and from each of the acute lesions the bacillus was easily found and inoculation of guinea pigs produced the usual results.

2. The kidneys of a man, aet. 65, in whom simultaneous obstruction of both ureters had occurred causing complete suppression of urine for nine days with a copious flow on the 10th day when patient was in articular mortis.

3. A series of kidney stones and gall stones was also shewn.

Remarks on the Surgical Diagnosis of Disease of the Gall Bladder and Bile Ducts.

The following remarks were part of the discussion on gall bladder disease.

If a distinction is to be drawn between the medical and the surgical diagnosis of diseases of the gall bladder and biliary passages, it would seem to be in the direction of later specialisation in those conditions which fall into the hands of the surgeon for operative treatment, for most of these cases are first treated by the physician and only a limited number of them are subsequently treated by the surgeon. The conditions which are generally referred to the surgeon are—1st., gall stones in the gall bladder or bile passages; 2nd, infective conditions leading to suppuration; and 3rd, malignant disease.

They should be enumerated in this order because both infective conditions and malignant diseases are usually sequels to an irritative lesion produced by the presence of gall stones. It must be remembered, however, that gall stones may remain for a very long time in the gall bladder without giving rise to symptoms, or perhaps it would be better to say, without having given rise to special diagnostic symptoms. Such I believe is the experience of surgeons so that in many of these cases submitted to operation, the patient, some 5 or 10 years after operation, will declare that he or she has never felt so well for a great many years, and that prior to operation, for a great many years he or she suffered from "dyspepsia," "indigestion," painful conditions about the lower part of the chest, etc., etc., general symptoms which could not be referred to any special lesion, and since operation all these have been entirely absent.

I believe that in many case such symptoms as those referred to are due to the presence of gall stones in the gall bladder, perhaps for a long time before characteristic symptoms appear. The first of the characteristic systom of gall stones is usually the so-called biliary colic, which is due to an attempt on the part of the gall bladder to expel the stone or stones through the bile passages, and if this attempt is not successful recurrence of the symptoms from time to time is to be expected.

In this connection I may say that I have recently come to the conclusion that the bile passages are capable of a degree of dilatation and of allowing the passage of much larger stones than I had hitherto believed or than is generally taught. I have known of the passage of very large stones which must have found their way directly through the gall passages and not by any irregular route. I have known of the

passage of large and long pieces of gauze which had been left accidentally in the gall bladder after operation.

Cholecystitis occurs, sooner or later, as a rule, when gall stones are present in the gall bladder, and then special symptoms are produced. Locally, pain and tenderness, fever, with usually, at first, distension of the gall bladder and later contraction until it is not recognisable. In this condition infection is most likely to take place. Infection by the typhoid bacillus, the colon bacillus, etc., being quite common and leading to suppurative or gangrenous conditions. Toxic symptoms, which are expressed by chills, fevers, etc., frequently occur in such cases, but it is a remarkable fact that the severity and frequency of the chills and the height of the fever do not give any actual indication of the seriousness of the lesion, for instance, very severe and frequently repeated chills with very high temperature, may occur in cases in which at operation no evidence of pus or of any suppurative process can be found and the gall bladder, in addition to containing stones, contains what is to the naked eye appearances at least normal bile. In other cases in which the symptoms are no more severe, multiple liver abscesses or a suppurative cholangitis is discovered at the time of operation.

Jaundice is not such a frequent symptom as is generally supposed, and in fact is only due to obstruction of the common duct, either by the lodgment of stones within it, or swelling of its mucous membrane and extension of a cholecystitis. The differential diagnosis between gall stones and malignant diseases of the biliary passages, especially in the early stages of the latter, is very difficult indeed, and in fact in most cases impossible.

A CURE FOR RED NOSES.

SOME unfortunate persons suffer from a tendency to redness of the nose, due to fugitive erythema which supervenes under slight causes, either internal or external. A Berlin physician, not improbably a sufferer himself, announces that this ephemeral but distressing condition may be cured by the application of benzine. He applies it on a folded piece of lint, which is kept in contact with the erythematous area for a few seconds, carefully avoiding any friction of the skin. If the application be repeated a few times the skin covering the nose becomes paler and less shiny. The benzine application may even be used as a prophylactic, so that persons whose noses are liable to vie in hue after dinner with the red, red rose can avert the calamity by including benzine among their cosmetic appliances.—*Medical press and Circular.*

INSOMNIA.*

By H. H. MacKAY, M. D., New Glasgow, N. S.

PROBABLY the best way to define insomnia would be to define what sleep is, and as there are different degrees of sleep, there would have to be the corresponding degrees of inability to sleep, or 'insomnia.'

Sleep might be described as that condition of physiological repose in which the functioning of the brain and nervous system is no longer projected on the field of consciousness. Sleep does not usually fall with equal force upon all the organs at once. Its invasion is progressive—some parts of the body may be fast asleep, while others are partly awake, and while still other portions may be more active than when ordinarily awake. Upon this fact depend the phenomena of dreams and various forms of somnambulism.

General sleep of the whole body is made up of the particular sleeps of its various parts, the cerebrum, sensorium, spinal cord, and the various muscles and organs must jointly and severally repose, for sleep to be sound and complete.

Excitability of one or more of these systems disturbs the repose of the whole body, and insomnia results. In this way we can readily see the necessity of using all of the parts of the body nearly equally if we are to have sound and complete sleep. Sleep is preceded by a feeling best described as sleepiness, and usually comes on gradually, one set of centres in the brain being obscured after another, generally in definite order, until all are involved.

The centres in the motor areas are the first involved, one group of muscles after another becoming relaxed, until the whole body resumes the horizontal position. Even the tension of the firmly contracted muscles of a hemiplegic limb is lessened during sleep. The only exception to this rule is where the sphincters remain contracted, but these in children sometimes relax during profound sleep, giving rise to enuresis. The motor centres in the brain fall asleep before those in the spinal cord, so that the normal inhibitory influence of the former is, for the time being, lost; and the activity of the centres in the cord is manifested often, by spasms and muscular contractions, when persons are falling asleep, more especially if tired by muscular exertions. The action of the freed spinal centre is so strong at times that the spasm awakens the sleeper.

Sleep next extends to the psychical centres in the hemispheres of the brain. The will ceases to control the working of the intellectual

* Read before the Medical Society of Nova Scotia, New Glasgow, July, 1902.

faculties and the power of perception grows less. The mind, no longer inhibited from within, nor corrected from without, revels in absurdities, fantasies, and dreams until, at length, all intellection terminates, or, at least, no knowledge of it is retained.

The special senses are next invaded. The eye ceases to see clearly, the eye lids drop, and the eye balls are rotated upwards, the pupils being contracted, as if to shut out the light, the extent of contraction of the pupil indicating the depth of sleep. Any external excitation through the skin, or other sensory organs, causes dilatation of the pupils, even if it does not awaken the sleeper. This feature can be studied easily during chloroform narcosis. The senses of touch and taste fail next, as illustrated by the infant going to sleep with its mouth full of food. The sense of smell is more persistent and often prevents sleep. This is often illustrated by certain plants in bed rooms preventing sleep, but if sleep is once produced the sense of smell is weakened because, for the keen perception of odours, it is necessary that the fragrant particles be dissolved in the mucus of the schneiderian membrane, and during sleep this mucus is very scantily secreted—hence odours that would prevent sleep will not awaken one. The sense of hearing (superior tempro-sphenoidal convolution), seems to be the most persistent of all the special senses. This sense has been used to estimate the depth of sleep by comparing the loudness of noise necessary to awaken the sleeper. Noises frequently, though not necessarily, prevent sleep, and loud noises often fail to awaken the sleeper, such as thunder, while an accustomed, or expected, noise readily arouses.

Lastly, the centres in the medulla are affected to a certain degree, the respiration is slowed, and the heart beats are reduced correspondingly. Sleep, having progressively invaded these parts of the nervous system, is said to be profound, and no act of volition can modify or terminate it.

If the inception of sleep be considered, it will be apparent that the centres situated highest in the cerebrum are the first invaded, while those at a lower level are successively included. This may depend upon the centres growing inactive consecutively, according to their position, and ceasing to attract a working supply of blood, or it may arise from the vascular supply of the centres becoming lessened relatively to their distance from the heart.

Probably the best way to study the cause of 'insomnia' would be to study the cause of sleep. Among the causes of natural healthy sleep we might mention the alternation of day and night. It would appear that sunlight is a stimulant to organic activity, more especially in its

higher forms and with its disappearance this activity is replaced by a period of repose.

> The night brings sleep
> To the green woods deep,
> To the bird of the woods its nest ;
> To care soft hours,
> To life new powers,
> To the sick and weary rest.

In this tendency to repose at night, man shares with all other living creatures. It would be very interesting in this connection, if we had the time, to look into the causes that have induced part of the animal kingdom to reverse this order of nightly repose and replace it by a period of activity. Prominent among the causes which predispose to sleep at night is the cessation of a majority of sensations which are constantly pouring in upon the brain during the period of daylight. Physiologists are now agreed that during normal sleep there is vascular dilatation of the skin, as a result of which there is a fall of blood pressure in the arteries at the base of the brain which lessens the blood supply to the cortex.

Professor Mosso, of Turin, conducted upon three persons, in each of whom a portion of the skull was wanting, permitting movements of the brain to be felt through the scalp, a series of experiments connected with the cerebral circulation, particularly during sleep. By means of special instruments, he took tracings of the movements of the brain and thoracic walls, and of the pulsations of the heart and of the radial artery at the wrist. He further devised the plethysmograph by means of which he estimated and registered the quantity of blood in the forearm. He showed :

(1) That in the act of going to sleep, a dilatation and relaxation of the vessels of the forearm occurred with a corresponding contraction in the vessels of the brain, this change becoming more pronounced during deep sleep.

(2) That all external stimulation, however slight, such as a ray of light falling upon the eye, a noise, etc., is attended by a contraction of the vessels of the forearm, a greater blood pressure, and an increased flow of blood to the brain.

(3) That these changes are accompanied by a modification of respiratory rhythm and an acceleration of the heart beats.

(4) And that during sleep the quantity of blood in the brain is subject to fluctuations without any apparent cause. These fluctuations may account for dreams and the different degrees of sleep.

Fatigue of any sort is one of the most energetic causes of sleep. Every muscle rests after contraction ; even the heart gives a momentary pause after contraction. We often see women going to sleep between

the pains of a severe labour. Based upon these experiences, physiologists have suggested that sleep was caused by a supposed loading of the cerebral tissues with the acid products of their own disassimilation during the period of wakeful activity. The acid reaction of the brain and nerves after exertion, corresponding to the acid reaction of muscle after contraction, suggested the probability that an excessive presence of lactic acid and its sodic compounds might be the real cause of cerebral torpor and sleep. If this were so, the lactate of sodium would be the best medicine for "insomnia" which it is not. This theory does not explain the great stupefaction produced by cold, nor the unbroken sleep of the unborn.

Pflüger advanced the hypothesis that the state of wakefulness is maintained by a certain degree of activity in the cortical substance of the brain. Like all other bodily organs, this substance is renovated by the assimilation of nutrient material derived from the blood. By this process, oxygen, is stored up in chemical combination, forming explosive compounds, of which the precise composition is not understood. When for any reason the supply of oxygen is insufficient, as in haemorrhage producing cerebral anaemia, or when the red blood cells are impregnated with CO., chloroform, or any substance, capable of excluding oxygen from the haemoglobin of the blood, the cerebral tissues are imperfectly renovated, the explosive constituents of the cortical substances are thus inadequately renovated after mental activity, and the sensitive portions of the brain are no longer fitted to manifest the higher forms of intelligent activity. But, when nothing interferes with healthy nutrition, the requisite degree of instability in the protoplasm of the brain, is effected by the taking up of oxygen. Under the influence of the various nervous impressions reaching the brain, the unstable protoplasmic compounds break up into simpler forms. The energy thus liberated, in some way we cannot understand at present, and projected upon the field of consciousness, bring us into conscious relation with the external world.

By the 'neuron theory' sleep is explained in a simple way. The cortical cells of the motor areas have processes, extending toward the surface, called dendrites, and a protoplasmic process, extending downwards through the white matter of the brain, the internal capsule, the crus, the pons, the medulla, and into the spinal cord, where it terminates in a brush like extremity, the end tuft. Here it has a certain relation with the motor cells in the anterior horn of the cord, probably one of contact, though this is not definately known. If the nerve cells retract, this contact is broken; if the abnormal contraction of the nerve process is relieved, for the time being, the contact once more takes place. Evidently, if the neurons are functionally active their dendritic processes

must be in contact, without which consciousness is impossible. When the nerve cells are exhausted by fatigue, there is every reason to believe that their volume shrinks, and it is therefore more and more difficult for them to remain in contact. When relaxation comes, the processes retreat and unconsciousness, that is sleep, supervenes.

From this it would seem reasonable to suppose that unconsciouness, or sleep, is produced by something acting on the nerve cells in the brain which causes their dendrites, or processes, to retract so that the contact between each cell is broken. Whether this be due to something introduced into the blood by the metabolism of the tissues, or by chemical changes in the nerve cell itself, it is hard to say. Whatever the exact cause is, it seems to be proved beyond doubt that, during normal sleep, there is cerebral anaemia, with corresponding vascular dilatation of the skin. In the treatment of insomnia we should bear this in mind. The bulk of evidence goes to show that there are no vaso-motor nerves to the cerebral vessels, and that the volume of circulation through the brain is regulated by variations of arterial pressure in other parts of the body.

It is not my intention to go into the classification of insomnia, nor to diagnose its special causes. What we require more than anything else, in order to treat any abnormal condition, is to first understand the physiology of the normal condition, and thence to trace out the various causes which lead to the abnormal.

In persons of a sanguine temperament, the heart is, as a rule, large and powerful, and the bodily functions easily and quickly performed, so that, in health, such persons usually sleep well and soundly. In middle life, they frequently become subject to circulatory derangements which not infrequently leads to disturbed sleep. Many in this class are gouty, and, consequently, have a predisposition to insomnia, depending on an altered state of the blood from imperfect metabolism. Such persons bear loss of sleep badly. If the cause of insomnia is recognized, intelligent treatment can be given.

The neurotic temperament includes a class whose brain and nervous system dominate greatly over the other systems of the body. In health, sleep is of short duration, they are great workers, and apt to fatigue their nervous systems, which combined with a tendency to nervous disease, is apt to bring about insomnia. In middle age, when defective innervation brings about faulty digestion, resulting in impaired nutrition of the brain and nervous system, sleeplessness is seldom absent.

Persons of lymphatic temperament usually sleep well. Their functions, being languidly performed, have no tendency to circulatory or neurotic diseases which are great sources of insomnia.

It is well, therefore, to study the temperament of the individual, as it often gives a clue to the cause of the insomnia and the recognition of the cause is necessary for rational treatment.

CIRRHOSIS OF THE LIVER IN THE YOUNG.*

By J. T. FOTHERINGHAM, M.D., Toronto.

LAST November I was reminded of the saying that if an odd case of accident or disease happens in one's practice one will shortly see two more, by a series of three enlarged livers which came under my attention within about three weeks. Each patient was a female, and their ages were respectively, 29, 6 and 12 years. As in no case was *post mortem* examination available as a means of imparting exactitude to my research, I may state in advance that I do not pretend to any great scientific value for this paper, and do not even claim that each case mentioned is simply one of cirrhosis. The details of the cases in brief are as follows:

Case 1.—Mrs. A., aged 29. seen in consulation last November with Dr. J. C. Mitchell, of Enniskillen.

Family history.—Unimportant.

Personal history.—First pregnancy three years ago, with icterus and abluminuria at time of delivery, but good recovery and no serious illness before or since, till the present.

Present illness.—Delivered at full term six weeks ago. For some weeks before had jaundice, albuminuria. pallor, anemia, marked breathlessness, and much bronchitis, or at any rate over-secretion from the bronchi. By four weeks after labor, which seemed normal and had caused much temporary relief, she began to suffer again as before.

Present condition.—Temperature, 101-2F.; pluse, 100 to 120; respiration, 30 to 40, pale, breathless, orthopneic, syncopal, jaundiced, but not severely so.

Digestive system.—Tongue clean, blue and cyanotic, appetite poor. Diarrhea nearly constant of late. Spleen much enlarged; liver very large, down to level of navel. smooth, hard and painless. Some ascites, and a good deal of tympanites.

Genito-urinary system.—Urine contains albumin and is scanty and ill smelling (full examination not made).

Circulatory system.—Very anemic (blood examination not made). Heart very rapid, second sound relatively accentuated, some irregular complication at apex, great dilatation and diffusion of impact evidently myocardial change.

Respiratory system.—Fine râles here and there all over. Has been some consolidation of left base behind, now clearing up. A moderate effusion exists in left pleural cavity. Death occurred about five days after I saw her. The probable sequence of events here was, I think, as follows:

* Read before the Huron Medical Association at Stratford, July 10th, 1902.

(*a*) Toxemia during first pregnancy, shown in both albuminuria and icterus, at that time hemic, and reaching both the liver and kidneys in the blood.*

(*b*) Cirrhosis of the liver, biliary in type, not portal, the organ being now both cirrhotic and "nutmegged" from state of circulation.

(*c*) Splenic enlargement, due probably both to chronic venous congestion and to "vital reaction" to toxins reaching it by the blood.

(*d*) Myocardiac degeneration, with dilatation, due to chronic toxemia.

(*e*) Low inflammation of bases of lungs, with edema, and later pleural effusion.

Case 2.—Mrs. G's girl, seen in consulation in March, 1900, and again in November, 1901. History of chronic intestinal dyspepsia, with tympanites, etc. Large, well grown, but flabby child, with mild, chronic icterus, for past three months little or no ascites, very protuberant abdomen, capricious appetite, foul, irregular stools, diarrhea and constipation alternating, and the usual train of symptoms seen in chronic intestinal indigestion. Examination showed very large, smooth, hard, painless liver, lower margin down almost to navel, and left to be almost, if not quite over to left side of body. No heart or other visceral complication. After spending the winter in Bermuda, she is now at home doing very well, playing about all the time, and with health apparently restored. Examination of the liver this week shows it to be much smaller, though still distinctly enlarged, but soft and natural to the touch, and free from tenderness.

Case 3.—H. H., brought to Children's Hospital from country last November, aged 12. A well-grown girl, well nourished, had been at school till three weeks before, when the parents began to notice swelling of abdomen. Father said he could feel hard lump in epigastrium a year before. Previous history very indefinite; nothing beyond the ordinary digestive disturbance of childhood—malaria, alcohol and syphilis all definitely excluded.

Present condition.—Abdomen enormously distended with fluid, very breathless, face edematous and typically suffused and congested by obstructed venous return; not able to walk 20 feet, nor to lie down, particularly on left side. Edema of face, chest and lower limbs, appearance typical of chronic and very advanced valvular disease. No kidney lesion, urine normal; no cardiac lesion, but sounds loud and ringing; no murmurs; pulse regular though small; heart displaced upwards very

* This toxemia is familiar to us in the form of scarlatinal nephritis, and in those cases of hepatic cirrhosis which die from sudden so-called "uremic" poisoning instead of the gradual effects of circulatory embarrassment, though one must remember the important point that it is parenchymatous and not mainly interstitial in its effects, as seen in scarlatinal nephritis. I am not, of course, in a position to deny that the whole trouble arose from an undetected or unreported valvular lesion of the heart, perhaps of long standing, with compensation breaking down under pregnancy and parturition.

decidedly. Liver pushed up to nipple line on right side. Tapping of abdomen done November 9th, and 130 ounces fluid removed, clear, greenish-yellow, no fibrin or flakes in it, quite non-inflammatory in character. On the 13th a second tapping withdrew 96 ounces of a similar fluid. This child was taken from the Hospital for Sick Children, and on the advice of an outside man, who is reported to have said that it was peritoneal tuberculosis, was sent in to the General Hospital, where an exploratory incision was made, and the diagnosis of cirrhosis of the liver confirmed. The omentum was anastomosed; and though the fluid at first returned I was informed some weeks after from her home that she was then doing very well, and had very little ascites, having apparently largely recovered her circulatory balance, though no one would, of course, call this a complete cure, for the organic change in the liver has gone beyond full restoration. As some one has said, we might as well say that chronic valvular lesion is cured when ruptured compensation has been temporarily restored by rest and digitalis.

Points of similarity of all these cases are : 1. Age—childhood and early adult life. 2. Sex—all three female, contrary to usual experience, 22 of a series of 26 quoted by Osler from Schoehmann being males. 3 Etiology—extreme indefiniteness, also frequently seen in such cases. Alcoholism, syphilis, malaria and chronic lead or other similar intoxication can be reasonably excluded with certainty in each case, as well as valvular lesion, a very common cause of the hepatic enlargement known as mixed " nutmegging " and cirrhosis. I freely admit that in the absence of histological examination an element of uncertainty prevails, not as to the gross anatomy of the organ, but as to exact histological condition. One point in which Case 3 presents a striking difference from the other two, is in the presence of ascites and other evidence of extreme portal obstruction. Ascites is rare in such cases, but of course the rule in ordinary " portal " cirrhosis.

To turn aside for a few moments to an academical discussion of this disease, one need scarcely remind one's self of that most useful modern distinction of cirrhosis of the liver into (*a*) portal cirrhosis, (*b*) biliary cirrhosis, and (*c*) mixed cases. In portal cirrhosis the irritant, usually alcohol, reaches the organ by the vein and sets up the well known changes, development of scar tissue along the larger vessels so as to produce the multilobular or hobnailed type, or around the finer portal radicle to produce the unilobular type. One is struck by the unsettled state of pathological opinion on this disease. In Allbutt's system, Vol. IV., the article by H. P. Hawkins, of St. Thomas's Hospital, rejects the view that biliary cirrhosis, that is cirrhosis due to mischief *via* the common duct, exists as distinct from portal cirrhosis. It is spoken of as

"problematical," and though the problem of biliary cirrhosis is discussed at great length, the writer declines to accept the views of Hanot, Charcot, Hayem, Cornil and others, and claims that though the clinical features are very different from those of multilobular cirrhosis, the "difference depends partly upon the anatomical arrangement of the new fibrous tissue." The statement made in the same article can scarcely be accepted by any possibility, that it is "whether any cases of unilobular cirrhosis of the liver own any other cause than alcohol, and possibly malaria." It seems to be the case that while most livers cirrhosed by alcohol, and particularly by spirits, are very soon atrophic, some alcoholics particularly beer drinkers, show a combination of fatty parenchymatous change in the fine cirrhosis, the organ being enlarged, which justifies the view that some hypertrophic cirrhosis are alcoholic. Indeed the combination of cirrhosis with fatty degeneration usually results in enlargement. These views, however, do not at all justify a refusal to accept the possibility of the existence of a true biliary cirrhosis, overgrowth of bile canaliculi, particularly in the periphery of the lobule, with accompanying fibrosis and general increase of the organ in size, the irritant being either (*a*) a nonpyogenetic ascending cholangitis from the common duct and intestine, or (*b*) a blood-borne one affecting the canaliculi from above and causing a descending cholangitis. One may easily in this connection establish a very suggestive analogy between the liver and the kidney. In the latter organ it has been long recognized that there may be (*a*) a parenchymatous inflammation (large white kidney) from blood-borne irritants, *e. g.*, scarlatinal toxins, to which the large "biliary" type of cirrhosis seems to correspond closely in some cases; (*b*) chronic contracting interstitial vascular change, due to alcohol in many cases, to gout, etc., the exact counterpart of the contracted liver in both etiology and disturbance of function, but differing in this very important point that epithelial degeneration is not so prominent a feature in the liver as in the kidney, and (*c*) mixed cases of parenchymatous and interstitial inflammation. It is about this latter group of cases in the liver that dispute seems mainly to have persisted.

In the *Encyclop. Med.*, Vol. VI. the article by H. D. Rolleston, of St. George's Hospital, supports in a very convincing manner the view that there are two distinct groups of cases, (*a*) portal cirrhosis, commonly multilobular, though sometimes unilobular and fatty, and those often hypertrophic. (*b*) Biliary, always hypertrophic, and due either to (i) ascending cholangitis, the secondary infection being an essential in the process as well as the obstruction to the free outflow of bile, due in many cases to primary simple gastroduodenitis or (ii) to descending cholangitis, the process being begun at the upper end of the biliary "tree" in the

periphery of the lobule, and consisting mainly in proliferation of the normal bi'e canaliculi under the influence of an irritant brought there by the blood. By this infection theory the liver condition is only a local manifestation of a general infection, and arguments in its favor are given by Rolleston *loc. cit.* as follows:

(*a*) Other irritants, *e.g.*, toluylene diosmin produce it experimentally. (*b*) The frequency of fever. Can this not be due in very many cases to the intestinal intoxication, by ptomains and leucomains? (*c*) The splenic enlargement, which sometimes precedes, and is often relatively greater than that of the liver. (*d*) The leucocytosis, which is not found in portal cirrhosis, as if the system were reacting as it does to other infections, *e.g.*, the pneumococcus, or in appendicitis. (*e*) Glandular enlargement, not only in the portal fissure but sometimes in more distant parts.

To these arguments one may add the most suggestive work of Adams, of McGill, three or four years ago, in which, while investigating the Picton cattle disease for the Dominion Government, he isolated and grew a distinct, and constantly occurring organism.

He is tempted to accept the opposite view of an ascending cholangitis, particularly in the case of children with their frequent gastroduodenitis and catarrhal jaundice. There is little doubt in my own mind that both the children I have spoken of began in this way. Gilbert and Fournier regard the process as due to the colon bacillus with an ascending infection. They have found the colon bacillus in blood withdrawn from the liver by puncture during life, and subsequently in the liver and spleen in the same case. Hayem also found the diplococcus pneumoniae in blood aspirated from the spleen during life in a group of cases closely associated, if not identical, with hypertrophic biliary cirrhosis, in which there were enlargement of spleen, with jaundice and recurring fever. He gave them the name "chronic infectious jaundice." And the analogy between this view and the well known origin of bronchopneumonia from an ascending bronchitis is a particularly tempting one. Of course the chronicity and the absence of suppuration make it necessary to assume that the organism cannot be a pyogenetic one.

I may conclude my very hurried and imperfect handling of a complicated and undecided subject by reminding ourselves that here, as so constantly elsewhere in medicine, one must be on his guard against attempting to generalize too widely, or to adopt too Procrustean a system of classification, and on the other hand against making too many pigeonholes with their contained theories. The truth, probably here as on other occasions, lies in the midst, and the error of the opposing champion lies not so much in either theory as in their notion that their own theory is always right, and the other man's always wrong.

PROLAPSED KIDNEY.*

IN the *New York Medical Journal* of June 1st appears an original article on the subject of prolapsed kidney by Augustin H. Goelet, M.D, Professor of Gynæcology in the New York School of Clinical Medicine. A very distinct line is drawn by the author between floating kidney and movable or prolapsed kidney. The former is a congenital condition, where the viscus projects into the peritoneal cavity, is covered by peritoneum, as is also its pedicle. In the latter condition the kidney is dragged down out of its position, its fatty capsule becoming elongated to accommodate its movements. The organ is, however, still extra-peritoneal in position. The right kidney is found prolapsed more frequently than the left, its position under the right lobe of the liver with that weighty organ resting upon it, placing it at a disadvantage. Prolapsed kidney is much more frequent in women than in men. In an analysis of one hundred women taken at random at the author's clinic, twenty had prolapsed kidney.

Causation of prolapsed kidney.—This is largely a matter of conjecture. Rapid emaciation with accompanying absorption of the renal fat and associated with lax abdominal walls is regarded by many as conducing to the lesion. The wasting is more probably caused by the digestive and nervous disturbance provoked by the abnormality itself. In many cases the women discovered with prolapsed kidney give no history of emaciation and are well supplied with fat. On the other hand the author has noticed an absence of prolapse in many women who are extremely thin. Child-bearing and its consequent straining efforts during labour and the subsequent loss of flesh during lactation, may be regarded as prolific causes. Then again prolapse of the kidney is found in nulliparous women and in young unmarried girls. An instance is recalled of prolapse of the right kidney following upon prolonged sea-sickness in a newly-married woman of fifty-two years. Excessive vomiting and retching, straining and violent exertion, may be put down as definite causes of the displacement. Cases are recorded of the condition succeeding upon bad whooping cough.

Symptoms.—In the order of their frequency the author gives them as: Chronic indigestion accompanied by great and persistent bowel distension with gastric irritability; nervous restlessness with insomania; fatigue on exertion, particularly after standing or walking; palpitation and vertigo; epigastric pain to left of median line; dragging pain in the loin and down the thigh. To these may be added functional visceral derangements as, transient jaundice, irritable bladder, pseudo-ovarian

*Medical Times and Hospital Gazette.

pain, and pain over the appendix. Disturbances produced by prolapsed kidney are generally in proportion to the degree of misplacement and the length of time it has existed. Pain referable to the kidney region is a most infrequent sign of kidney prolapse. Most of the symptoms may be termed "reflex" in their development, and acute pain is rare.

Diagnosis.—Before commencing what should be a very complete physical examination, purges and enemata should be given to thoroughly clear the bowels. The patient should be placed in the standing position against a table or wall. She should then be directed to incline her body forward from the pelvis to relax the abdominal muscles. The examiner sits in front of the patient, a little towards the side to be explored. He then grasps the loin with one hand the thumb in front and just below the border of the ribs. The patient now takes deep inspirations and expirations, while the examiner's other hand manipulates the front of the abdomen so as to get a displaced kidney, should there be one, between his fingers and the thumb above. Renal prolapse must be differentiated from distended gall-bladder, tumors of the pylorus, intestinal growths, and impacted fæces in the colon.

Treatment.—Should the condition not give rise to troublesome symptoms no treatment need be suggested unless the patient be neurotic or liable to exaggerate her slight abnormality. She should be cautioned to avoid strains as tending to increase the displacement. A properly fitting corset would furnish all the support required. Where the prolapse produces recognisable but not severe symptoms, an abdominal bandage and pad might relieve but will never cure, as it does not hold the organ in position or replace it in any way; it simply affords sufficient support by pressure upon the intestines to prevent the kidney dragging to its fullest limit. The indication for operation is such an extent of prolapse as to cause symptoms prejudicial to health. Fixation with sutures is the only method of cure. The author's observations have led to the following conclusions:—

1. That prolapsed kidney is more frequent than generally supposed.
2. That it is often not suspected, as the symptoms arising are not directly referable to the kidney.
3. It is often missed through inexpert examination.
4. When the prolapse produces definite symptoms, no palliative measures are of avail.
5. Lumbar fixation is the correct method of treatment.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

PRIMARY SPASTIC PARAPLEGIA.

AN address by Erb delivered at the Post Graduate College, London, on this subject is reported by the *British Medical Journal*, Oct. 11th. He described the condition as early as 1875, but his views met with considerable opposition, and indeed do so at the present. The trend of symptoms, which, by their constant occurrence as a syndrome, led the author to claim for them recognition as a separate disease, are a certain amount of feebleness (paresis) of the lower extremities, more or less muscular rigidity in the same region, and a marked increase in tendon reflexes. A fourth symptom has lately been recognized, the so-called Babinski reflex of the sole of the foot, but is closely related to the exaggerated tendon reflexes. No other symptoms are present in the cases of this "pure spastic spinal paralysis," but there is a family form where it occurs in a number of cases in the same family—probably due to hereditary influence.

The post-mortem appearances are a pure lesion of the pyramidal tracts, and in addition slight lesion of the direct cerebellar tracts and trifling sclerosis of the column of gall—the latter are not of primary importance in Erb's opinion. Clinically, the feet and legs are first affected and the progress of the case is very slow—extending over years and decades—the arms, back, neck and head may become affected but the disease in itself rarely produces fatal results. Nothing certain is known of the etiology.

POISONING FROM PENNYROYAL.

IN the *Virginian Medical Semi-Monthly* Holland reports a case of poisoning from this "popular" abortifacient as follows:—

Married woman; age, 24 years; had never borne children, and greatly abhorred the idea of becoming pregnant; strong and robust. She had gone over her menstrual period about one week. She applied to a fellow practitioner of mine for something "to bring on the flow." The remedy prescribed was oil of pennyroyal. About 3 o'clock P.M. she took seven drops of the drug, with no effect; at 6 o'clock she repeated the dose, and still no effect; at 9 o'clock, she informs me, she took about

half teaspoonful and immediately retired. She soon dropped to sleep, and in about an hour awoke and complained to her husband of great dizziness and nausea In a few moments she vomited and began to complain of her extremities becoming stiff and cramped. By this time she had lost consciousness and was seized with a violent tonic contraction of all the muscles, opisthotonos being well marked. This spasm lasted only a few minutes and left the patient talking incoherently and tossing about the bed. The toxic symptoms now gradually began to subside and consciousness was regained in about half hour, but there was no recollection, on the part of the patient, of what had happened during the past hour. Upon my arrival she had regained consciousness, but complained of great weakness and cramps in the stomach, and slight desire to go to stool. The pulse was rapid—108—and feeble; respiration and pupils normal, and toxic symptoms seemed to be subsiding, so I gave nothing, and watched the course of the symptoms. There were no more spasms or untoward symptoms, and I found the patient, next morning, attending to her daily duties.

The toxic dose in this case was half drachm, and from the symptoms produced by this dose, it is evident that the drug should be administered with great caution.

I should have stated that the desired effect of "bringing on the flow" was not accomplished.

THE USE OF POTASSIUM CHLORATE IN CASE OF HABITUAL DEATH OF THE FŒTUS IN THE LATER MONTHS OF PREGNANCY.

IN the section for obstetrics and gynaecology at the recent meeting of the British Medical Association, a paper was read by Jardine, of Glasgow, giving results of the use of potassium chlorate in cases where pregnancy was habitually terminated in the later months by death of the fœtus. The treatment was suggested by Sir James Simpson for non-syphilitic cases half a century ago but has fallen into disuse. Jardine describes five well marked cases in which it was successful. Of course the treatment is different where syphilis is suspected.

RECENT STUDIES OF IMMUNITY.

THE fourth Huxley lecture reported in the *British Medical Journal*, October 11th, was delivered at the opening of the winter session of Charing Cross Medical School by Welch of Johns' Hopkins on the subject of Immunity in its relation to Pathology. It is interesting to note

that Huxley delivered in 1876 the opening lecture at Johns' Hopkins University and as Welch says: "gave utterance to ideas concerning university, and especially, medical education which were at the time and have remained their inspiration and guide. After referring to the opposing theories of Metchnikaff and Nuttall, the writer refers to the discovery of that important physiological capacity of the healthy organism that enables it to produce substances specifically antagonistic to all sorts of foreign cell and cellular products and derivatives. The activities of these are manifested in various ways as the neutralization of poisons and of ferments, injury or destruction of cells, associated with characteristic morphological changes, cessation of motility of cells or their appendages, agglutination of cells, precipitation and coagulation, and from these activities they derive their titles as antitoxins, antienzymes, cytotoxins, agglutinins, precipitins and coagulins, or generically anti-bodies. Recently these anti-bodies have been differentiated into two groups. Antitoxins, which are single bodies; the others, cytolysins, consist of two bodies, one of which produces the specific effect only by the inter mediation of the second, which is ordinarily the product of immunization known as intermediary bodies or amboceptor, the first being known as complement or alexin and containing the toxophoric atomic group. Ehrlich's theory as to the action of these substances is the latest, representing the affinities of the cells, toxins, etc., as side chains or receptors called haptaphore groups. The essence of the idea is tersely expressed by Behring: "The same substance which, when incorporated in the cells of the living body, is the prerequisite and condition for an intoxication, becomes the means of cure when it exists in the circulating blood."

The animal body is not endowned with properties designed to meet pathological emergencies, its weapons of defence being only those with physiological function, but Ehrlich believes that the physiological power of good assimilation is turned to account for purposes of protection.

THYROID TREATMENT AND PUERPURAL ECLAMPSIA.

NICHOLSON, of Edinburgh, contributed a paper to the section of obstetrics and gynaecology of the British Medical Association on the relation of thyroid inadequacy to puerpural eclampsia, and the use of extract of the gland in its treatment. Threatened eclampsia is marked by (1) changes in the character of the pulse and blood pressure. (2) Marked diminution in the amount of urine secreted. (3) Diminished quantity of urea in the urine, suggesting some interference with nitrogenous metabolism. Similar conditions obtain in thyroid inadequacy.

The cause of puerpural eclampsia in a general way is as follows:— The supply of codo-thyrine in the tissues becomes insufficient for the needs of abnormal metabolism; hence certain toxic substances find their way into the circulation, which by their action on the blood vessels lead to the arrest of the renal secretion, and in this way prevent their own excretion. In support of this we note (1) During the course of normal pregnancy there is no marked alteration in the character of the pulse; the sphygnographic features are those of moderate pressure and remain so till labor has commenced. (2) In women who threaten to become eclamptic the characters of the pulse become strikingly altered; the sphygnographic appearances are those of vaso-constriction. (3) There is no great or lasting increase in the blood pressure in normal pregnancy except during labor. (4) With the appearance of the first pre-eclamptic symptoms there is a pronounced and permanent rise in blood pressure, which increases still more before the onset of convulsions. (5) When pre-eclamptic symptoms are fully developed the radial arteries are contracted and their calibre is diminished. (6) In this condition the secretion of urine is at its lowest.

So in this kind of suppression of urine the main object of treatment is to relax the spasm of the renal arteries, and thyroid extract possesses a specific action in enlarging the calibre of the vessels and hence the indication. Moreover it is probable that it possesses the power of correcting the errors in metabolism and thus increasing the secretion of urea, in itself a valuable agent in producing diuresis.

TYPHOID BACILLUS A YEAR AFTER ATTACK.

IN *The Lancet* Oct. 4th, Jónas reports a case of typhoid abscesses which appeared about a year after the febrile attack, and which on opening yielded a pure culture of bacillus typhosus. Notwithstanding rigorous precautions this was replaced by staphylococcus aureus to the entire exclusion of the first mentioned bacillus. This case was complicated by a perforation of the profunda femoris artery, but made a good recovery.

ANÆSTHESIA IN THE SOUTH AFRICAN CAMPAIGN.

IN the *Medical Times and Hospital Gazette* for October, R. W. Collum, who was attached as civilian medical officer to the South African field force writes on the use of anæsthetics during the war. Chloroform was used entirely, as the temperature forbade the use of ether, and in the field hospitals no conveniences for its administration were supplied. The most striking feature was the large amount of the drug required, in

individual cases averaging 4.85 oz. per hour; the average in England being about 1 oz. in 54.17 minutes. The average amount used for induction of anæsthesia was 6.20 drms. and the time 8.30 minutes—the excessive amount used is due, probably, to the exposure to sun and wind.

One case was anæsthetised eleven times in sixteen days, once while asleep, the time required for induction decreased with each repletion; the amount of chloroform required increased up to the fourth time but decreased finally to a half of the amount used at first.

POST-DIPTHERITIC PARALYSIS.

E. E. LASETT, (Victoria University, M.D. Thesis) as a result of a careful study into the pathology of post-diptheritic paralysis, concludes:—

(1) That, in the paralytic stage of diptheria, the only important change discoverable is situated in the peripheral nerves.

(2) That, if there are any changes in the cells during the preparalytic stage, they do not stand in a causal relation to the parenchymatous degeneration in the nerves.

(3) That, therefore, the parenchymatous degeneration of the nerve fibres must be regarded as the primary lesion.

DIAGNOSIS IN RENAL CASES.

IN the October number of the *Cleveland Medical Journal* Lower concludes a discussion of this subject and suggests:—

1. Before doing a cutting operation upon the kidney—especially before doing a nephrectomy, the presence of a second functionating kidney should be established.

2. The best and safest method for ascertaining the presence of a kidney is by the aid of cryoscopy and ureteral catheterization.

3. The function of the kidney is best determined, in order of importance:

(*a*) By the freezing-point of the urine.

(*b*) By phloridzin glycosuria.

(*c*) By the quantity of urine excreted.

(*d*) By the freezing of the blood.

4. The most reliable method of obtaining the separate urines is by the ureteral catheter.

The determination of the freezing-point of the urine and of the blood is the latest devised method of determining the amount of products of the metabolic processes present in these fluids and is an indication of the condition of the kidney epithelium.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

THE PRESENT STATE OF THE "OZÆNA" QUESTION.

THOSE who have to do with patients suffering from atrophic rhinitis, wherein the nasal passages are unduly wide and contain more or less foetid pus and crusts, will welcome any contribution, tending to throw light on the ætiology of the disease, or assisting in mitigating its disagreeableness.

L. Grünwald, of Munich, well known for his decided views on this question, read a paper at the recent meeting of the British Medical Association, giving his views of the pathology and treatment of ozæna. Grünwald believes all cases of ozæna have some suppurative foci in the accessory cavities of the nose, and, when this is found and cured, the purulent secretion stops. In cases where no foci are to be found, he says it does not follow they are absent, but that they are too obscure to be easily detected. The long series of remedies recommended in many publications, have soon found their deserved fate. Nevertheless imperfect local treatment, along with general treatment of the mucous membrane, can, in some cases, alter the whole condition so far that the disease disappears. In concluding the remarks on treatment, Grünwald says, "Considering the very great difficulties of radical treatment of focal suppurations in many cases, and especially in disease of the maxillary sinus, it will in each single case be a question of consideration whether to take the uncertain way of relief by general measures or the *more certain* but troublesome one of radical cure by treatment of the focal disease." By cure, the author means a cessation of the suppuration and not a regeneration of the atrophied intra-nasal structures.

THE NON-OPERATIVE TREATMENT OF STRABISMUS.

GEORGE M. GOULD, at the recent meeting of the American Medical Association, read a paper on this subject which is published in the Associations Journal. The author, for some years, has been foremost among the few who have been trying to prevent the furore for strabismus operations. Gould does not believe there is ever any necessity of a strabismus operation. He says, "Catch the babies early enough and no operation will be needed, provided that requisite intelligence, patience,

and conscience are brought into play. I know of no more heinous sin of opthalmologists than the one that has been and still is revealed almost every day in my practice, the sin of telling parents that operation will be required, but not before the child is seven or nine years old. At that late age, generally speaking, irreparable injury may have been done." Exception to these statements is made in cases of traumatic strabismus, paralytic strabismus, in most cases of alternating strabismus, and in some anomalous cases that defy all rules of diagnosis and treatment.

TREATMENT.—(1) *Prophylaxis.*

(*a*) Public instruction should be given that strabismus (misnamed squint), in its earliest stages is curable without operation, but only on condition that the child is put in charge of an oculist at a sufficiently early age.

(*b*) The individual child should be taken in hand, by the oculist, at the earliest day when heterophoria, temporary or acute strabismus, is diagnosed.

(2) *Treatment.*

(*a*) The treatment of ametropia (sub-normal vision due to error of refraction) requires that proper glasses should be put on the child as soon as he may safely wear them. It may not be necessary, or advisable, at this time to demand that they be worn all the time, but only at stated periods. If they are correctly prescribed, made, and worn ; and, if they are needed, a child of two years may wear them with the happiest results.

(*b*) *The treatment of Heterophoria* (disturbances of equilibrium). Gould has never seen a case of heterophoria that requires operative measures, nor has he ever seen a successful case that has been operated on by others. He has been able to cure, or entirely relieve, symptoms by thorough going prism gymnastics. Correction of any error of refraction may be all that is necessary.

(*c*) *The treatment of Amblyopia.* In those cases of great unequality of vision between the two eyes, the eye with the least acuteness of vision becomes more or less blind. Very little, as a rule, is done for these cases, usually the good eye is fully corrected, and a partial correction is given for the other eye ; or, if the vision be very bad, no attempt at all is made to give it vision, a plane glass being used for cosmetic reasons.

Gould comes out squarely against this practice, he corrected the error in each eye, and, though there is some discomfort in wearing the glasses at first, he perseveres. By using a blinder over the good eye at meal times, the amblyopic eye is gradually educated, so to speak, to see again. Very great accuracy is absolutely essential to good results, fre-

quent re-testing and changing of the lenses, as occasion arises, being necessary for accurate and successful work. The muscle balance must also be carefully treated. The final success will depend on the patients persistence, patience and co-operation. In children, too small to wear glasses, or the blinder willingly, keep the *good* eye under continuous mydriasis for weeks, or a month or two.

THE DIAGNOSIS AND TREATMENT OF MALIGNANT STRICTURE OF THE OESAPHAGUS.

IN opening the discussion on this topic before the Laryngological Society of London, Charles Symonds, F.R.C.S., gives the results of his observations throughout many years of active practice and close observation of oesophageal diseases. In his paper, published in the *Journal of Laryngology, Rhinology and Otology,* he summarizes the diagnosis in the following way :—

(1) Among early symptoms we may have so-called "dyspepsia," nausea, and revulsion for food ; pain alone when the central district is affected.

(2) The passage of a bougie is the only way to clear up the case, and its employment need not be feared.

(3) That extra-oesophageal disease rarely gives rise to serious dysphagia.

(4) That spasmodic obstruction, apart from the hysterical form, has always, when decided, an organic cause, and that this would be better called intermittent dysphagia.

(5) That with regard to the three special districts it may be said :

(*a*) That all organic obstruction in the upper third is malignant and has a special tendency to cicatrize.

(*b*) That in the central half of the gullet, a sarcoma, or a myoma, both rare diseases, may cause fatal obstruction ; that here, also, a pouch may give rise to difficulty in diagnosis, but can generally be excluded.

(*c*) That in the lower end alone does simple stenosis occur, and that here there may be difficulty in distinguishing it from cancer of the stomach, causing great reduction of the cavity (leather bottle stomach). Finally, that in estimating the extent of the disease, the special value of the *steelbulb* is noted and also the use of the *Condé bougie* in obstruction of the lower end.

Treatment.—(1) While the patient can swallow fluids and semi-fluids or a bougie can be passed and plenty of nourishment taken, he may be left so long as (*a*) he can swallow well, (*b*) a small bougie No 12 (catheter guage), can be passed.

(2) If the dysphagia increases, even though a bougie can be passed, a tube must be inserted, or gastrostomy performed. These conditions are seen in the soft pungating forms.

(3) If a bougie cannot be passed, or goes down with difficulty, then the same course must be followed, as we know that complete closure may occur at any time.

(4) If both conditions arise—the patient cannot swallow, or a bougie cannot be passed—then immediate mechanical treatment is required.

In cricoid obstruction, the long rubber tube gives excellent results. When not well borne, gastrostomy, if selected, should be performed early.

In disease of the central portion, the short tube is serviceable in a fair number of cases, and, when it acts well, is superior to any other method. It must be replaced by a long feeding tube when pulmonary symptoms arise.

In disease of the cardiac orifice, tubage is so uncertain that gastrostomy should be performed when dysphagia becomes serious.

TINNITUS AURIUM.

LEWIS, in the *Philadelphia Medical Journal*, has a very practical paper on tinnitus. A great many factors must be considered before the aurist undertakes the management of these cases. The underlying cause must be sought for and found before intelligent treatment can be adopted. Suppurative, and non-suppurative catarrh of the tympanum, foreign bodies in the external auditory canal, various degrees of labyrinthinitis, circulatory disturbances as anaemia, hyperæmia, aneurism, or heart disease, or renal disease, acting through the circulatory system, may be a factor, as well as the too heroic administration of quinine, or the salicylates.

Treatment.—The administration of nitro-glycerine, or the inhalation of amyl nitrate, will lessen the noises due to anaemia, while it increases those due to hyperaemia. In the circulatory form of tinnitus, due to excess of blood in the tympanum, or labyrinth, general vascular sedatives, with care of the general health, will often be sufficient. Bavarian aurists have had some splendid results with compressed air in this form. In the non-suppurative cases of middle ear catarrh, with, or without, ossicular adhesions, the occasional use of a catheter and the frequent use of aural massage often gives very satisfactory results. Vassant, of Philadelphia, claims good results from the use of dry hot air in the tympanum. Hydro-bromic acid is of most use in the hyperaemic forms, and should be given in 15 minum doses three times daily freely diluted in water. Pilocarpine (hypodermically) is of most use in the purely

labyrinthian forms. Kramer treats tinnitus, unaccompanied by deafness, with a solution of strychnia (gr. 1 to ℥1) through the eustachian catheter into the tympanic cavity. Gleason, in the catarrhal forms, uses a pill containing argent, nitratis, gr. 1-4 ; ext. hyoscyami, gr. 1-3 ; and strychnia, gr. 1-13 ; one to be taken after each meal. Dunkanson gives ammon. mur. in nervous tinnitus. Gomez reports excellent results from the use of conium hydrobromate, gr. 1-60, three times daily, in nearly all forms of tinnitus. Gruber and Wilde prescribe tincture of arnica, 15 mins., three times a day, when there is no congestion. There is a certain proportion of cases, however, in which one may try all these remedies, and all will probably fail.

SUB-CONJUNCTIVAL INJECTIONS IN DISEASES OF THE EYE.

GIBBONS, in *the Journal of Eye, Ear, and throat diseases*, writes on this method of treating ocular inflamation, particularly the interstitial and suppuerative forms of keratitis and writes: The injections act by stimulating the lymphatics to absorb the products of inflammation, and also acts as a diluent to the toxins. It makes little difference whether one employes a normal salt solution, or a 1-8000 solution of hydrarg, bichlor, save in specific cases, when a solution of potassium iodid and iodine seems of greater efficacy. The solution is introduced into the lymph space of tenon, from whence it makes its way into the perichoroidal lymph space, and is then brought into direct contact with the diseased area.

In syphlitic cases, the solution used is made as follows.

℞ Pot. Iodid grs. xv.
Iodine grs. 1/7
Aq. ad. ℥1.

FOR ECZEMA OF THE EARS.

℞ Zinci oxide 10 parts.
Starch, 10 parts.
Petrolatum, 20 parts.
Calomel, 2 parts.
M ft. umguentum.

In the foregoing prescription, for the Calomel, acid carbolic 7½ grs; acid Salicyl, from 7½ to 15 grs.; xeroform tribromo-plennol bismith 30 grs. or ichthyol, 15 to 30 grains may be substituted. One must not mistake the acute dermatitis, not infrequently seen about the external auditory meatus, and caused by the irritating nature of the aural discharge, for ordinary eczema.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

THE following cases were reported at the Montreal Medico-Chirurgical Society :

Dr. James Stewart presented a living case of asthenic paralysis The patient was a man of large frame and in the prime of life. The symptoms began with an internal strabismus and a ptosis of both lids, followed by general weakness coming on gradually. This weakness was not nearly so marked when the patient got up in the morning, but became progressively worse towards evening, and exertion of any kind tired him out very rapidly. For example, he was always compelled to rest the muscles of his jaw when at meals. The characteristic rapid exhaustion was also present on electrical stimulation.

Dr. Shepherd showed a case of aneurism of the femoral artery which was so high up that operative interference was not deemed justifiable, and consequently he resorted to digital compression. Relays of students at intervals of five minutes carried on the treatment, and the result was a complete success. Drs. Elder and Hutchison recalled a similar case in 1884, in which the result was also good, the patient being still alive and in good health.

Dr. Bell showed a hair-ball, forming a complete mould of the stomach, removed from a girl of 12 years of age. The patient had been ailing for about two years and had become very greatly emaciated. When the patient was examined at the Royal Victoria Hospital a tumor was easily seen in the epigastrium ; palpation confirmed inspection, and the mass was found to be firm, movable, and corresponding in shape and position to the dilated stomach. A diagnosis of hair-ball was at once made, and the history of biting and pulling the hair was subsequently obtained on close questioning. There was considerable difficulty experienced in removing the mass, as it extended several inches into the duodenum, but at length a complete cast of the stomach and upper portion of the duodenum was delivered. Some twenty-six cases were found reported in the literature of the subject. Of these but two were diagnosed before operation.

Dr. Chipman read an interesting and carefully prepared paper on two cases of caesarian section, followed by subperitoneal hysterectomy.

In each case the mother recovered, and while in one case the premature child died, in the other a full-term child survived.

A public meeting, which was attended by His Excellency the Governor General, was held in the Art Gallery on October 30th for the purpose of forming an organization to combat the spread of tuberculosis. In opening the proceedings His Excellency said that as honorary president of the Canadian Association for the Prevention of Consumption, he was pleased to avail himself of the opportunity for showing his sympathy with the movement directed against the ravages of tuberculosis. He had no intention of going into details concerning the effects of the disease or the best means of combatting them; he left this to the medical men to dwell upon, but he would suggest that, since public opinion has been at length aroused, the objects in view would be best attained by local effort, provided always that the maturely considered advice and direction of those who have made not only a scientific study of the fatal illness, but of the habits and manner of life of the population which it assists is accepted, recognizing too that the success of any such undertaking must of course largely depend on unanimity of effort, and that individual benevolence must be prepared to combine for the common good. Professor Adami next gave a few statistics in regard to the mortality resulting from tuberculosis. He said that last year 833 persons died in Montreal from this cause alone, 791 the year before, 1,000 the year before that and 1,047 in 1898, as compared with 7,000 deaths from all other diseases.

A resolution was carried, on motion of Dr. Roddick, the last clause of which read thus: "That there be appointed a committee of citizens of Montreal to create a enlightened public interest regarding tuberculosis, to establish a fuller knowledge of the dangers of and losses caused by this disease, and to further the employment of all means whereby it may be prevented or its ravages lessened." A second resolution, proposed by Sir W. Hingston, outlined the measures to be instituted by this committee, which is to consist of nearly two hundred leading citizens with the following members as executive: Drs. Roddick, Lachapelle, Blackader, Adami, Richer, James Stewart, Lt. Col. Burland, Mr. S. P. Stearns, C. M. Holt, R. H. Lane and Prof. Bovey.

The officials of the Royal Victoria, the General, and the Western hospitals, in reply to a request that the hospitals would say whether or not they desired to care for patients afflicted with contagious diseases, stated that they had come to the conclusion, with the advice of their respective medical boards, that it would be injudicious to set apart any portion of their existing buildings or premises for the

reception of infectious cases, believing that it would prejudicially affect the purposes for which their hospitals were instituted, namely, the treatment of general surgical and medical diseases ; and that they were therefore unable to make any proposal to the city for the care of such cases in connection with the existing hospitals. They suggested, however, that the project which would meet the approval of and gain the greatest support from the English-speaking community would be the establishment of a separate and distinct infectious hospital for English-speaking patients, such hospital to be under the control of a separate board of governers, who would have charge of its management and finances and the appointment of a medical and nursing staff. In making this suggestion it was assumed that the Hotel Dieu and the Notre Dame Hospitals would undertake to make the necessary provision for the care of the patients from the French-speaking section of the community. It is very likely that this proposition will be adopted, for the aldermen have already made an offer to the above mentioned hospitals. As a matter of fact it is beginning to dawn upon the civic authorities that the situation is very grave ; for the house on Mount Royal Ave., which has been turned into a species of civic hospital, is almost full, and very soon all fresh cases will of necessity be turned away. The whole affair has been such a disgrace to Montreal that it is to be hoped that a solution has at length been found.

At the quarterly meeting of the Board of Governors of the Montreal General Hospital the committee of management emphasized the financial stress under which the hospital was labouring. The treasurer's account for the last quarter stated that the income amounted to $17,094, an increase of $647 over the corresponding quarter of last year ; the expenditure for the past quarter was $23,250, or $809 less than the corresponding quarter of last year. For the first nine months of the current year, Jan. 1st to Sept. 30th, the receipts were $67,524 against $74,496 in 1901, expenditure $74,562 against $64,204 in 1901, indicating the necessity of still further increased financial support from the friends of the hospital. The medical superintendent reported that 743 patients had been admitted to the hospital during the quarter against 720 in 1901, and 8,301 outdoor patients against 7,638 in 1901.

The city analyst has been doing good service in exposing the sale and manufacture of adulterated food stuffs in the city. A short time ago he made the sweeping statement that the most of the so-called "home-made tomato catsup" owed its attractive colour to aniline dyes, and also that a vast quantity of "strawberry jam" was on the market which had never approached a strawberry. His most recent exposure is

in the sausage line. The outer coat of a sausage is stained, even as we stain a baccillus, with Bismark brown, thus saving much time in the smoking process and giving them a delightful "well done" appearance. "Renovated" or "process" butter, an ingenious product of this modern civilization of ours, also came under his ban, as well as an unusual quantity of that unfailing commodity "watered" milk.

The annual dinner of the medical faculty of McGill University at the Windsor Hotel on December 8th was an eminently successful affair. The Governor-General was present in his capacity of visitor to the University, and by a happy coincidence Dr. Parkin, late principal of Upper Canada College, was also present. The dining-room was filled with guests, and the interest was sustained to the end of the long toast list, which was interspersed with selections from a good musical programme. Mr. J. M. McCullough, '03, was chairman, and seated beside him were the Governor-General, Principal Peterson, Dean Roddick and Dr. Parkin. After the toast of "The King" had been honoured with typical McGill enthusiasm, Mr. W. E. Compbell proposed the health of "Our Visitor, the Governor-General." His Excellency was warmly received on rising to respond, and, after thanking the students for the reception granted him, he proceeded to speak of the prominent position which McGill held at the present day, and of the splendid facilities for hospital work afforded the students. In closing he spoke of the efficiency of the teaching staff and hoped that the students would still further show their appreciation of their work by pressing on to new laurels in the realm of medical science.

In responding to the toast of "Our Alma Mater," Principal Peterson strongly hinted that a residence for the students of McGill would shortly be erected. Dr. Parkin followed Dr. Peterson in responding to the toast. The key note of his address was Imperialism in its relation to Canada. He said that Canada was the most interesting centre of the world's development at the present time, and that it had an amazing future before it; already it was going by leaps and bounds, and therefore Canadians ought to stand in the forefront of that development. The students before him should make the best they could out of McGill,then, after having obtained all they could from their alma mater, they should search the world for its best and then return to Canada and pour it out upon their native land.

To the toast "Our Dean and Professors" Dr. Roddick replied, and he was followed by the newly appointed professor in hygiene, Dr. Starkey, who expressed his pleasure at having the opportunity of publicly meeting so many of the undergraduates.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., M.R.C.S., Eng., Halifax.

DURING the latter part of the summer and fall, typhoid fever was prevalant throughout the provinces. The hospital at Halifax had an unusually large number of cases. These, for the most part, came from the country and suburbs of the city, where the water supply is not all that might be desired.

Lately there has been a number of cases of diphtheria in Halifax and vicinity. We have not learned of a single death in cases where antitoxim was used early.

An epidemic of smallpox visited York county, N.B., but we believe it has been about stamped out. There were a number of cases of the disease in Halifax last winter. The city board of health ordered a general vaccination. Of course there were the usual number of cranks, who had their objections; but, in spite of this, the order was pretty generally observed by the citizens. Most of these had their children vaccinated anyway. This is as it should be in a port like Halifax, where immigrants are being landed nearly every week during the winter months.

A rather interesting point, in connection with the Halifax epidemic, is the fact that it was traced to a town on the coast of Maine. A fishing schooner was in the harbour of that town. Several sailors attended a dance at a house in which there happened to be a case of smallpox. These men never reached here, but some others, with whom they had been associating, did. They arrived on a coasting steamer. No one on the steamer showed any signs of smallpox until some time after, when one of the crew was found to be suffering from the disease. Later on, it broke out in several parts of the city where these men had gone, although they themselves never showed any signs of it. Happily there has not been a case since early summer. The epidemic in St. John, N.B., was also stamped out with equal success.

The second meeting of this branch of the British Medical Association was held at the Victoria General Hospital on the evening of October 29th A very large number of the medical men of the city were present. After some preliminary matters were attended to, Dr. Kirkpatrick presented a very interesting case of aniridia, or congenital absence of the iris. Two brothers of the patient and one sister were afflicted in the

same way. The parents, irides, as far as could be learned, were normal. Dr. Kirkpatrick made some remarks on the condition, and pointed out that the lens in the right eye was floating, that of the left being attached above. In this case there was considerable defect of sight.

Dr. Silver showed a case of alcoholic neuritis. The patient, in this instance, had been under observation for some time. The case illustrated the noxious effects of alcohol on the nervous system, in as much as relapses had followed improvement under treatment. The cause of the relapse being his inability, or unwillingness, to abstain from alcohol.

Dr. Curry presented a case of gastric ulcer which had been cured. The continuance of the pain, in this case, led to considerable discussion. It was suggested that, as this patient had been having morphine from time to time, this might account for the condition he was now in.

Dr. Chisholm gave a report on several cases of intestinal obstruction that had been recently operated upon by him successfully.

Dr. Murphy commented on Dr. Chisholm's report and referred to several cases of his own.

Dr. James Ross showed a boy who had suffered from lupus on the arms and legs. The boy had been in hospital for some time and had made wonderful improvement. He was first treated by the x-rays, but of late was getting urea, as recommended by Harper in the *London Lancet*. Since getting the urea his progress towards recovery had been much more rapid.

After this part of the programme was completed, Mr. Kenney, the Superintendent of the hospital entertained the members at luncheon.

On Wednesday evening November 12th, the society met at the Halifax Hotel.

Dr. G. M. Campbell, President of the Branch, was appointed a member of the advisory committee of the Victorian Order of Nurses.

Major Jones, late of No. 9 field hospital, read a very interesting paper on his experiences in South Africa, during the latter part of the late war. Dr. Jones gave a detailed account of the enlistment, equipment, and transport of the field hospital, together with what they did when there. He gave a general idea of the faults that existed and suggested some improvements in our medical service. The paper was followed by some remarks from Drs. Hare, Murphy and Hawkins.

The ladies who have been collecting for the Victorian Order of Nurses have been very successful. So far nearly $2,000.00 has been raised. This will enable them to employ several nurses.

Dr. M. T. McLean, of North Sydney, was recently married to Miss Blanche Lehigh, of Brockville, Ont.

UNIVERSITIES AND COLLEGES.

TRINITY MEDICAL COLLEGE.

THIS College has in charge of its various departments a staff of twenty seven professors, lecturers, demonstrators and instructors. It is in affiliation with Trinity University, University of Toronto, Queen's University, University of Manitoba, and is recognized by the Royal College of Surgeons, England, the Royal College of Physicians, London, the Royal Colleges of Physicians and Surgeons, Edinburgh, the Faculty of Physicians and Surgeons, Glasgow, King's and Queen's College of Physicians, Ireland, and the Conjoint Examining Boards of London and Edinburgh.

The history of this College dates from 1850, when a Medical teaching faculty called at first, "The Upper Canada School of Medicine," was established by the late Drs. Hodder and Bovell, who, with the colleagues they selected, constituted a body of excellent Medical teachers. In the fall of the same year this "School" became the "Medical Department of Trinity University." But in 1856, notwithstanding its brilliant prospects, circumstances occurred, over which the faculty had no control whatever, and such as could not happen now, which led to the resignation of the entire Medical Staff.

After the lapse of fifteen years, the Trinity Medical Faculty was reorganized in the Spring of 1871 on a basis suggested by Dr. Geikie, the present Dean of the College.

At present there is a large number of students in attendance on lectures.

The following fees are charged: Matriculation, $5; Registration, $5 Annual College fees, $100; Hospital perpetual ticket, $34; Hospital for six months, $14; Lying-in Hospital, $8; College Fellowship Examinations, first year, $5; primary, $5; third year, $5; final and diploma, $5; Supplemental Examination, $5; Registration in Trinity University, $5; for degrees, M.D., C.M., $40, which may be paid $15 for primary, and $25 for final examinations; supplemental primary, $15; if not more than four subjects, $8; supplemental final, $12; if not more than five subjects, $5.

The following scholarships are offered: In the first year, three of the value of $50, $30, and $20; Dr. Sheard offers a prize of $25 for highest standing in first year physiology; in the second year, two

scholarships, $50 and $30. Trinity Medical College offers to final students a gold and two silver medals. Trinity University offers a gold and two silver medals to the students taking the final M.D., C.M., and two silver medals to those taking the primary examination for M.D., C.M. These medals are not awarded on less than 75 per cent. of the marks.

The clinical instruction is given at the Toronto General Hospital, St. Michael's, and the Hospital for Sick Children. These hospitals have a total capacity of 600 to 700 beds.

Students who have not otherwise matriculated and who do not intend to practice in Ontario, but who desire to take the Fellowship Diploma of Trinity Medical College, or to graduate in Trinity University, are required to pass an examination which consists of the following subjects:

(1) Writing and Dictation; (2) English Language including Grammar and Composition; (3) Arithmetic; (4) Algebra, including simple Equations; (5) Euclid, Books I., II. and III.; (6) Latin Grammar and Translations from Cæsar's Bellum Gallicum, Bks. I., II., *or* III. *and* IV.; *or* V. *and* VI.; *or* Cicero, de Lege Manilia *or* Virgil, Æneid, Bk. I.; also translation of easy passages from unspecified Latin authors; (7) and *any* ONE of the following optional subjects *which may be selected by the candidate*: (*a*) Scripture History and Mathew's Gospel, ch. i. to x. incl., in Greek; (*b*) Xenophon's Anabasis, Bk. I.; (*c*) French, Voltaire's Charles XII., Bks. VI., VIII.; (*d*) German, Schiller's Thirty Year's War, Bk. I.; (*e*) Natural Philosophy, including Mechanics, Hydrostatics and Pneumatics (Balfour Stewart's Lesson in elementary Physics is recommended); (*f*) *or* Logic.

The Matriculation in Arts of Trinity University, or of some other recognized University will be accepted in lieu of the above.

The standard of passing is 25 per cent. on each paper and 33 per cent. in each department.

The Candidate for Degrees of M.D., C.M. of Trinity University must be of the full age of twenty-one years.

He must furnish certificates of having attended at least four Winter Sessions at some Medical College recognized by the University, except he be a graduate in Arts or Science, when attendance at three Winter Sessions will be accepted.

Before admission to the Primary Examination in Medicine he must have attended in some recognized Medical College the following courses of lectures:—Two courses (attended in different years) of eight months each, on Descriptive Anatomy, Practical Anatomy, General Chemistry, Materia Medica and Pharmacy, Physiology, and Histology. And one

course of four months on Practical Chemistry, and on Toxicology respectively.

Before admission to the Final Examinations he must further have attended, in different years, two courses of Lectures of eight months each, in some recognized College on Theory and Practice of Medicine, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine, and Clinical Surgery. Two courses of four months each on Medical Jurisprudence, Therapeutics and the art of prescribing. And one course of four months on General and Special Pathology (taken during the Third year). And one course of four months on each of the following subjects: Applied Anatomy, Sanitary Science, Pathology, Practical, General and Special (taken during the Fourth Year.) He must have attended for at least *eighteen* months, the practice of some general Hospital, and, during two sessions, Clinical Lectures on Medicine and Surgery. He must have attended for at least six months the practice of a Lying-in-Hospital or must give satisfactory evidence of having otherwise had equivalent advantages of obtaining obstetrical knowledge, with a certificrte of attendauce upon at least six cases of labor.

He must have passed two University Examinations, viz., the Primary and the Final Examinations in Medicine.

Before admission to the Primary Examination, he must produce a certificate that he has passed the First Year's Examination in some recognized Medical College.

The Primary Examination may be passed at the end of the Second Year. The subjects are: Descriptive Anatomy, Practical Anatomy, Physiology, Histology, General Chemistry (including Chemical Physics), Toxicology, Practical Chemistry, Materia Medica and Pharmacy.

The Primary Examination of other recognized Universities, or that of the College of Physicians and Surgeons of Ontario, Quebec or Manitoba, will be accepted in lieu of the University Primary Examination, provided that the Candidate shall in all cases pay the full fee for the Degree, but if any of the subjects of the Primary Examination do not form part of the Examination allowed, the Candidate shall be required to take such subjects together with his Final Examination.

Graduates of any recognized University will not be required to take such subjects of the Primary Examination as they have already passed in their University Examination.

Candidates for Final Examination in Medicine will be required to furnish proof that they have passed an Examination at the end of their Third Year in such subjects as the Faculty of the Medical College or School they have attended, may require.

In cases where this has been unavoidably omitted, as from illness, an equivalent Examination must be passed prior to taking the final Examination.

The final Examination shall take place at the end of the Fourth Year: The subjects are: Theory and Practice of Medicine; Principles and Practice of Surgery; Clinical Medicine, Clinical Surgery, Midwifery, Gynæcology, Diseases of Children, Medical Jurisprudence, Sanitary Science, Therapeutics, Applied Anatomy, Practical Pathology, General and Special Pathology, including Bacteriology.

In order that a Candidate may pass in either of these Examinations he must obtain thirty-three per cent. of the marks assigned to each paper, and fifty per cent. of the total marks of the Examination.

Trinity Medical College holds an Examination at the end of each of the four academic years. On the results of these Examinations, the College Fellowship Diploma, Scholarships and Medals are awarded. This Fellowship Diploma has the rank, in Great Britain, of a degree in Medicine from a Colonial University. For the Fellowship Diploma, the candidate must have passed a recognized matriculation, have attended lectures for four sessions, and have passed the four Annual College Examinations.

UNIVERSITY OF TORONTO, MEDICAL FACULTY.

THE Medical Faculty of the University of Toronto was established in the year 1887. At present there is a staff of teachers of fifty-six professors, lecturers, and demonstrators. There are in attendance on lectures some 475 students.

The fees are as follows: For registration, $5; tution, first year, $100; tution, second year $100; tution, third year, $100; tution, fourth year, $100; biological laboratory supplies, first year, $1.50; second year, $2.75; physiological laboratory, $2; chemical laboratory, first and second years, $3; tution fee for a fifth year, $50; medical psychology, fourth year, $5; matriculation or registration, $5; for a supplemental examination, each subject, $2; annual examinations, $10; practical chemistry examination, $0.50; adeundem statum, $10; degree of M. B., $20; degree of M. D., $20; adeundem gradum, $20; a perpetual hospital ticket, $34; an annual hospital ticket, $14; and the Burnside lying-in-hospital, $8.

The following Scholarships are offered: At the first examination, one of $50, and one of $30; and at the second examination, one of $50, and one of $30.

A gold medal and three silver medals are offered annually by the faculty among those students who are honour Candidates for the degree of M. B.

Dr. Daniel Clark offers two prizes of $30, and $20, for the purpose of stimulating the study of mental diseases.

The George Brown Memorial Scholarship was founded by Dr. A. H. F. Barbour of Edinburgh. It is tenable for one year, and is the interest on one thousand pounds sterling. It is awarded on the subjects of anatomy, biology, physiology, embryology and histology, and pathology.

The Reeve Scholarship is awarded on the results of the work in medicine and clinical medicine, surgery and clinical surgery, obstetrics, and pathology. It is of the value of $250 and is awarded annually for four years.

The Starr medals, three in number, one gold and two silver, are awarded to Candidates for the degree of M. D. whose theses on the subjects of anatomy, physiology, and pathology attain a sufficiently high standard.

Clinical instructions are given by members of the medical staff at the Toronto General Hospital, 425 beds; at St. Michael's Hospital, 160 beds; and the Hospital for Sick Children, 160 beds.

The degree of M.B. is given to students who have matriculated and who have completed the prescribed course of study and passed the examinations required.

Candidates for a degree must pass the Junior Matriculation Examination, unless (1) they possess a degree in Arts, not being an Honorary Degree, from any Canadian or British University; or (2), have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University; or (3), have been registered as matriculated in the College of Physicians and Surgeons of Ontario. Candidates may delay Matriculation until any time before the Second examination for the degree of M.B. Certificates of having passed Second or First Class; Junior or Senior Leaving; or Forms II., III. or IV. examinations of the Education Department of Ontario will be accepted *pro tanto* for subjects of the General Course at any Junior Matriculation Examination.

The subjects for Pass Junior Matriculation shall be taken in *one* examination, and shall be as follows:—English Composition, English Literature, English Grammar, Algebra, Euclid, Arithmetic, History (British, Canadian and Ancient), Latin, and any *two* of Greek, French, German, Experimental Science (Physics and Chemistry).

The following are the requirements of the professional examinations:

The subjects of the First Pass Examination are Physics, Inorganic

Chemistry and Biology; and the certificates required are: Anatomy, a course of at least 50 lectures; Physiology, at least 50 lectures and demonstrations; Inorganic Chemistry, at least 50 lectures; Physics, at least 25 lectures and demonstrations; Biology, at least 40 lectures; Practical Chemistry, at least 50 hours; Practical Biology, at least 50 hours, and Practical Anatomy, Instruction during six months.

The second examination covers Anatomy, Physiology, Embryology and Histology, Materia Medica and Elementary Therapeutics, Chemistry, Organic and Physiological, and the certificates required are:

Anatomy, a second course of at least 50 lectures; Physiology, a second course of at least 50 lectures and 50 demonstrations; Organic Chemistry, at least 50 lectures; Materia Medica and Elementary Therapeutics, at least 50 lectures; Embryology and Histology, laboratory instruction of at least 50 hours; Practical Chemistry, a second course of laboratory instruction of at least 50 hours; Practical Anatomy, a second course of instruction during six months; Practical Pharmacy, instruction during three months.

The results of the laboratory work in Physiology in the Second Year are taken into consideration in making up the standing of all students in that subject in the Class List. For those students who obtain their instruction in Physiology elsewhere, a practical examination in Physiology is held during the annual examination.

The subjects of the Third Year's Examination are: Clinical Medicine, Clinical Surgery, Physiological Obstetrics, and Pathology. The results are considered in determining the standing at the Final Examination. The following certificates are required for this examination:— Medicine, a course of at least 50 lectures; Clinical Medicine, at least 50 lectures; Surgery, at least 50 lectures; Clinical Surgery, at least 50 lectures; Pathology, at least 50 lectures; Practical Pathology, instructions of at least 50 hours; Physiological Obstetries, at least 50 lectures; Medical Jurisprudence and Toxicology, at least 50 lectures and Materia Medica and Therapeuties at least 50 lectures.

The final examination consists of Medicine and Clinical Medicine Surgery and Clinical Surgery, Obstetrics, Pathology, Therapeutics, Gynæcology, Medical Jurisprudence, and Toxicology, Hygiene. Topographical Anatomy, Eye, Ear, Nose and Throat.

The certificates required are: Medicine, a course of at least 50 lectures; Clinical Medicine, at least 50 lectures; Surgery, at least 50 lectures; Clinical Surgery, at least 50 lectures; Pathology, at least 50 lectures; Practical Pathology, at least 50 hours; Obstetrics, pathological, at least 30 lectures; Gynæcology, at least 50 lectures; Topographical Anatomy, at least 50

hours; Hygiene, at least 25 lectures; Medical Psychology, at least 12 lectures; Ophthalmology, Otology, Laryngology and Rhinology, 25 didactic lectures and 25 clinics; having conducted at least six labours.* proficiency in vaccination;* attendance for eighteen months in the wards of a public hospital having not less than 100 beds; attendance for twelve months on the out-practice of a hospital, or dispensary, or with a registered practitioner, and having attended twelve autopsies.

Graduates of this University in the Honour Department of Biological and Physical Science may enter at the beginning of the Third year and may postpone the examination in Materia Medica and Elementary Therapeutics until the third examination.

Graduates in Arts of the University may enter at the Second examination, but will be required to take such subjects of the First examination as they have not taken in their Arts course, though in these subjects they shall not be required to take an Honour standing. In the case of Undergraduates in Natural Sciences, certificates of attendance on the second course of Practical Anatomy and on the second course of fifty lectures on Anatomy, may be presented with the certificates of attendance on the lectures of the Third year.

The special attention of students entering Medicine is directed to the recent enactment of the University Senate instituting a New Curriculum in Science leading to the Degree of Bachelor of Arts. This course is specially adapted for students who intend entering eventually upon Medicine, and embraces the purely Science Subjects which are demanded of students in the primary years of Medicine. This new curriculum is so arranged that at the completion of the Fourth Year in the Arts Course the student has already fulfilled the requirements of the first two years in Medicine. It will therefore be possible in the future for a candidate who has obtained his Arts Degree in this course to enter immediately the Third year of Medicine, and he will be qualified to present himself for the Degree of Bachelor of Medicine two years after graduating in Arts. In other words, it is possible for one to obtain the Degree of Bachelor of Arts and Bachelor of Medicine after six years study at the University.

Degree of M.D.

Bachelors of Medicine at least one year's standing may obtain the degree of M.D. on the fulfillment of either of the following conditions:—

1. Having composed a thesis of approved merit on some scientific subject in the department of Medicine, or

2. Having passed an examinatioin Clinical Medicine and Surgery in together with an examination in the History of Medicne.

*Certificates will be received from any registered practitioner.

THE ONTARIO COLLEGE FOR WOMEN, TORONTO.

THIS College is now in its nineteenth year. It is the only College in Canada wholly devoted to the teaching of women. The College session is one of eight months. It has a staff of 38 professors, lecturers, and demonstrators. It is in affiliation with the University of Toronto, and the University of Trinity College, and also prepares its students for the examinations of the College of physicians and surgeons of Ontario, as well as for its own College Examinations. The students of the College may select any other University for the purpose of obtaining a degree in medicine.

There are about thirty students in attendance on lectures.

The fees are as follows: The matriculation fee is that of the University or examining body the students select; The faculty fee for each year is $100; perpetual hospital ticket, $34, admitting to St. Michael's, the General, and the Children's; Toronto Dispensary, $2.50, 6 months; College maternity department, $8; Burnside, $8. The clinical instructions are given at these hospitals.

The following prizes are offered for competition:

1. A first and second prize (value $15.00 and $10.00) in books or instruments, awarded for the best examination, written or oral, in the Primary branches.

2. The Ross Prize in Gynæcology is awarded on the following conditions:

a. That there be a written and an oral examination therefor.

b. The written to be in two parts at Christmas and Easter—and by the Lecturer in Gynæcology.

c. The oral to be practical and final and given by the Donor.

Candidates must in all cases give satisfactory evidence of regular attendance at lectures during the session.

To obtain any of the afore-mentioned prizes, candidates must pass the prescribed examination with First Class Honors.

Three courses are open to a student beginning the study of Medicine.

(1) To qualify to pursue the practice of medicine in the Province of Ontario. The Matriculation Examination is in July. The course is five years from and after the date of passing the Matriculation Examination.

(2) To qualify to obtain a degree of M.D., C.M., or M.B. The Matriculation Examinations are held in October and March (Trinity University), for Toronto University. The course is four years.

(3) To qualify for the diploma of the College. There is no Matriculation examination. The course is four years.

The lecture tickets of the Ontario Medical College for Women are accepted by all of the above mentioned examining bodies.

For the Matriculation and Academic course of these bodies, see their respective Curricula.

College examinations may be held at the end of each session by the Professors.

No candidate will be considered as having passed any College examination, who has not obtained at least 50 per cent. of the number of marks allotted to each subject of such examination.

To obtain honors in any College examination, or any single subject of such examination, 70 per cent of the aggregate marks allotted to such examination, or single subject will be required to entitle the candidate to the standing of First Class Honors, and 60 per cent. to that of Second Class Honors.

All students who present a certificate from any University, acceptable to this College, of having the first year examination of the said University, will be credited as having passed the first year examination of this College, and be entitled to have their names published with the names of those who take the College examination.

Diplomas will be awarded at the close of the Final Examination to successful candidates. The candidates for diplomas must furnish satisfactory proof:

Of having attended a full course of lectures in the Primary and Final branches of the Ontario Medical College for Women.

Of having spent four entire years in the study of medicine at the Ontario College for Women, or at some recognized University, College or School, the last of which must be attended at this College.

Of having passed the Faculty Examination at the end of their fourth year. In lieu of this examination the certificate of having passed the Final Examination of any University recognized by the Board of Directors will be accepted.

The College is not empowered to grant degrees in medicine. The College, therefore, requires no certificate of Matriculation examination but will accept that of the University selected by the student.

The College building is one of the most complete of its kind in America. The various rooms are furnished with every requisite for the comfort and assistance of the students. The dissecting room is entirely separated from the main building.

MEDICAL SOCIETIES.

MINUTES OF THE TORONTO MEDICAL SOCIETY.

(Stated Meeting November 20th, 1902.)

THE meeting was held at the Toronto General Hospital. The President, Dr. Hay, in the chair. The minutes of the last meeting were read and adopted. Drs. Burns, Heggie, McFaul, Fletcher, Moore, Brown and Kerr were elected to membership.

Dr. W. P. Caven exhibited a case of cardio-vascular condition, age 71. Six weeks after the onset of a cough had a pain when coughing. A systolic bruit was plainly to be heard. Dr. Oldright related a case of aneurism, the sac being in the lung and bursting into the pleural cavity. Dr. Price-Brown related a case that had been intubated. No aneurism had been found but a fibroid of the larynx had been detected. Dr. McPhedran said that aneurism appeared to be less frequent than formerly. He had seen this man a month ago, when there was no bruit and no tracheal tug. He said that persistent pain was a symptom of aneurism. He had had one case, at least, where the pain was the only symptom and was intrathoracic. Dr. Ferguson said that aneurism and syphilis were closely related, the aneurism developing years after. The iodides gave improvement for a time at least, both by treating the underlying syphilis and by relaxing peripheral arterial tension. Dr. Hunter asked if there were any laryngeal symptoms. Dr. McPhedran presented a case, age 31, gardener, 8 years ago his back was injured when working as a motorman. There was spasm of the right leg during cough. Three years ago he was well. A year ago he wounded himself with a pick. For the last four months he has been unable to work. The arms are spastic, there is loss of power to empty the bladder, sexual power is gone, there is no sensory disturbance, all the reflexes from the shoulders down are increased. Ten years ago had a pimple. Drs. Thistle, Ferguson, Macgillavry, Webster, and Chambers discussed the case. Dr. McPhedran said in reply in spastic paraplegia there were no genital, urinary, bowel, or sensory symptoms. In syphilitic paraplegia there were spastic plus urinary, sometimes bowel, genital, and often some sensory.

Dr. McPhedran then showed a case of amyotrophic lateral sclerosis. A year ago he was overworked and exposed, his legs became stiffened, later his arms were effected. Six months ago the hands were involved with twitching. Three months later the hands began to waste. In

another month swallowing and speech were affected. Jaw-jerk was marked. Dr. Ferguson asked had strych. nit. been tried hypodermically. Dr. Price-Brown asked as to the condition of the vocal cords. In reply it was said the vocal cords were not affected, even though bulbar paralysis was present. He had used strych. nit. hypodermically without much benefit.

Dr. McPhedran also showed a case of general sebacious cystic condition.

Dr. C. L. Star exhibited a case of operation for talipes equino-varus. The man was 35 years old.

Dr. Thistle showed a case of progressive muscular dystrophy. Dr. Ferguson discussed this case and outlined the diagnosis and classification of the disease.

(STATED MEETING DECEMBER 4TH, 1902.)

The President Dr. Hay in the chair.

Dr. Rudolf read a paper on the results of the use of antitoxine at the Sick Children's Hospital. The main point was that there had always been diphtheria at the hospital, with exacerbations in the spring and fall. The antitoxine had been used in all cases and as a prophylactic for two years. They had since then not had a single case on the books. With only two deaths during the period of treatment by the antitoxine.

Dr. Barker, the guest of the evening, then gave a short description of the work done in the investigation of the plague. He said that the plague was due to the bacillus pestus, found for the first time in Hong-Kong, where the recent epidemic originated. There was no disease where germs were so abundant as in bubonic plague, it was a discovery due to the modern method of investigation and due to bacteriological research. The main form was the glandular,—bubonic There were also the pneumonic and septicæmic types. The inguinal, femoral, axillary, and cervical glands were the most frequent seats of the buboes, in the order named, and depending on the seat of infection, or point of entry. The sputum was haemorrhagic in the pneumonic form, and contained the bacilli. In San Francisco there had been six cases, the rats there were not infected. He then described a plague camp in India, and the method of disposal of the dead of the different castes, illustrating through the discourse with lime light views. Dr. Bryans moved a hearty vote of thanks which was seconded by Dr. Oldright and carried by a standing vote.

Dr. Rudolf's paper was then discussed. Dr. Carveth said he was glad to hear that Dr. Rudolf had no bad after effects. He had developed

a very troublesome urticaria himself after the use of the serum. Dr. Hunter said that it would seem from the report of two cases that the antistreptococcic serum had been of more benefit than the antitoxic. Dr. Ferguson said that he had never seen a bad symptom after the use of antitoxine. That duplicate infection was very common such as diphtheria and streptococcic, scarlet fever and diphtheria. Dr. Webster said he was struck most with the immunizing effects. Were the two fatal cases one of pure infection and most in need of the serum ? Dr. Wilson said that mixed was more frequent than pure infection. That the serum was more prompt in its action in pure cases. Dr. Rudolf said in reply that he did not think that the effect was entirely due to the antistreptococcic serum in the two cases reported.

Dr. Greig presented a patient to the society for examination. It was a case of Charcot's joint disease. He outlined the history, man about 40, 13 years ago was a hard drinker, and had syphilis, 3 years ago a paralysis of the third nerve developed, got better in two months under the iodides. While bathing this year he turned over upon his right ankle. It was swollen with very free movement and grating. Dr. Galloway, in discussing the case, said that it was a very rare disease. This was the fourth case he had seen. The swelling and crepitation were usually out of all proportion to the condition and complaints of the patient.

Dr. Powell read a paper, giving the histories of a number of cases of genital strangulation : (1) An iron ring was found at the base of the penis, there was a great deal of tumefaction. The ring was removed by a saw made for cutting iron. (2) A man, 35, said that a condon had torn and rolled up and been left on for a time. It was rolled into a ring. After removal, the penis took a month to regain its normal size. (3) A child of two was brought in with the penis in almost a gangrenous condition. Behind the corona was found a deep sulcus, at the bottom of which was a ring of hair wound round. It was 20 inches in length when unwound. (4) A case of Dr. D. B. Frazer's of Stratford was reported. A man, a railroad employee, had slipped on a large iron nut. With a new file, it had taken five hours continuous hard labor to remove the nut. He related also two other cases where brass rings had been removed, one by immersion in mercury, and three of gold wedding rings, and one of a gold keeper.

THE CANADA LANCET

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EDITORIAL.

THE ONTARIO MEDICAL COUNCIL MATRICULATION.

IN the December issue of THE CANADA LANCET we had something to say on this subject. It was there held that the attempt to raise the matriculation standard ought to meet with approval, and no doubt will from all who have the best interests of the medical profession at heart. But it may be possible, in the desire to do good, to go too far, at least in the first advances made in the standard. In our last article it was remarked that the Council should adhere to the position already taken that the honor matriculation should be the one required of medical students. Since expressing that opinion, we have taken considerable pains to enquire into this matter, and find that to take honors in all subjects would be a very difficult, if not an impossible, task.

To take second class honors, the candidate must obtain 50 per cent. of the marks, and, for first class honors, he must secure 66 per cent. of the marks. The honor matriculation course consists of Greek translations from prescribed authors, sight translation of authors not prescribed, translations of English into Greek, and grammatical questions. Latin of similar extent and treated in the same way. English composition, literature, and rhetoric, or English authors. French grammar and translations from French authors and English into French. German to the same extent as the French. British history since 1763, Greek and Roman history, and the geography of these periods, and countries. Mathematics: Algebra to advanced work, euclid six books, trigonometry. Physics, namely, mechanics, hydrostatics, and electricity. Chemistry· Chemical theory, and practical chemistry. Biology, as the elements of Zoology and Botany.

It may be admitted that the honor work in History, French, German and Mathematics cannot be regarded as important subjects, while the sciences must be taken during the professional course. In the pass matriculation, the candidate must take English Composition, Literature, and Grammar; Algebra; Euclid, books I., II., and III.;

Arithmetic; British and Canadian History; and Latin; and any two of Greek, French, German, and Science. If to this general pass course, the honor work in the English subjects and Latin were added, the matriculation requirements would be as near perfection, as, under the circumstances, it may be possible to make them. We would suggest that, of the four subjects in the pass matriculation, any two of which may be taken, the pass Greek should be made compulsory, with any one of the remaining three, or none of them for that matter. A knowledge of Greek, however elementary, is of much value to the proper understanding of many medical terms.

If the Council would modify its resolution of last June, so as to read the pass matriculation with Greek, and one of French, German or Science, or omit these three altogether from the list, and the honor English subjects and honor Latin, no serious objection could be raised against the standard demanded. As a means of encouraging further culture on the part of those about to enter upon the study of medicine, the Medical Council could well afford to accept first year standing in any of the Canadian Universities. The General Medical Council for Great Britain accepts the matriculation of the various Universities, The council should also state that second-class honors will be accepted. It should also be made clear whether or not the resolution of the Council means merely a pass standing on the honor matriculation subjects. The regulations of the Education Department give a pass standing to those who write on the honor matriculation, but only obtain the pass marks of 33 per cent. This might technically be held to be passing the honor matriculation.

A careful study of the opening lectures, delivered before the students of a number of the British Colleges, by such leading educationists and teachers as Sir Arthur Rücker, Sir Dyce Duckworth, Sir Frederick Travers, W. B. Cheadle, T. Whipham, etc., shows that there is a strong desire in their minds to raise the standard of the general education required for registration as a medical student. The General Medical Council for Great Britain has adopted a five year course of professional study. The subjects of medicine, surgery, and obstetrics are not written off until the end of the fifth year. In this respect the Ontario Medical Council has done well to adopt a five year course of study. Quebec, we are glad to see, is moving in the same direction. At a recent meeting of the Board of Governors for Quebec, it was decided to adopt the five year course, but this requires confirmation by the Legislature before it becomes law.

We feel sure that, if the members of the Medical Council will carefully study the regulations of the Education Department, and also take the opinions of leading educationists throughout the Province, they will

come to the conclusion that the above course of preliminary study will prove suitable in every way, and acceptable to the student, the teacher, and the public alike.

To remove any doubt as to the interpretation to be given to regulation 1 of section 1 of the regulations of the Medical Council for 1902-3, it was recently decided by the executive committee that the standard of admission for 1903 shall be the same as for 1902, and for 1904 and subsequently the standard of admission shall be either:—

(1) Junior matriculation in arts, including physics and chemistry with honor standing in any one subject of the course, or

(2) Senior matriculation in arts as now provided by regulation 2, section 1.

As the changes now announced will not come into operation until 1904, there will be ample opportunity for their discussion and amendment if necessary at the coming meeting of the Medical Council next June.

THE ANNUAL MEDICAL DINNERS.

THESE annual banquets of the medical students and the members of the teaching staffs of the medical colleges are now regarded as among the most important and noteworthy of the many functions of the social life of Toronto, and many other cities. At these gatherings there is a union of teacher, student and graduate on terms of intimate friendship, which must redound to the benefit of the College, whose friends thus assemble round the festive board. The banquets of this year were not less memorable than those of former years.

One of the features of the speeches at each of the banquets was the decided tone of loyalty in each case towards the respective colleges. It was a case of we have a worthy alma mater and we shall prove ourselves worthy sons. He who is a worthy alumus of his college will be a worthy son of his country, and we rejoice in this strong spirit of college loyalty. The *esprit de corps* of college life becomes the *esprit de corps* of national life. The graduates of these colleges are now a numerous body, and many of them have no small degree of influence in their various localities, while some have acquired a fair amount of wealth. It would not be a difficult task for the alumni of these colleges to do something of a substantial character in aid of the scientific branches of medical study. To endow the chairs in anatomy, physiology and pathology, would be a worthy object for the alumni to keep constantly before their minds.

Another feature of the speeches was the determination on the part of both colleges to keep abreast of the advancement now going on in medical science. This is a laudable ambition, but to make it effective demands money ; and the alumni, as above indicated, could do much. To raise an endowment fund for scientific purposes of $50.000 would be an easy task to a body of professional men, numbering among the thousands. At the Trinity Medical banquet Dr. N. A. Powell spoke of the fact that new responsibilities were arising and must be met. He claimed that the graduate going forth from the college must be able to cope with conditions of practice as they now exist, and hold his own with the graduates from other colleges. Prof. Barker, of Chicago, speaking at the banquet of the medical students of the University of Toronto, dwelt upon the vast amount of work that was now being expended on original research. Along these lines a great army of workers are engaged searching out the true causes of diseases, and in a scientific effort for means of their prevention and cure. *Nec silet mors, nec arcanum sit remedium.* Prof. Barker also spoke of the tendency to establish a short B.A. course for those who are going into the study of medicine. This we think is highly commendable. A fair degree of general culture is of the utmost importance to the professional man. Already the University of McGill and the University of Toronto have formulated courses of study by which a student can obtain his B.A. and M.B. in six years. It would be well if the medical council could do something to encourage students to take this combination course. We see no reason why it could not, and indeed we are strongly of the opinion that it can and should. Students who take such a course could be allowed to go up for their license at the same time as they obtain their M.B.

We wish to refer to the remark of Dr. Pepler, at the Trinity Medical banquet, that he saw in the future a closer relationship between the Medical College and the University. This is in the right direction, and is in harmony with the tendency of the day. The great universities of Europe, Britain, Canada and the United States have their medical faculties as an integral part of the university system of teaching and work.

THE ONTARIO HOSPITAL ASSOCIATION.

IN the month of February last, at the call of a circular letter which was sent to the secretaries of the hospitals in Ontario, a large number of persons, interested in hospital work, met at the Queen's Hotel, Toronto. An Association was formed, and officers elected. The report of the meeting was published in THE CANADA LANCET for March.

The Association promises to be an influential organization. Many of the hospitals in the Province have joined it, and also many of the trustees and others interested in hospital work have become members. The objects of the Association are to procure increased Government aid for the maintenance of indigent patients in the public hospitals of Ontario; to take steps to secure a proper amount of county and civic aid, and to promote, by mutual suggestion and discussion, the interests of hospital work throughout the Province.

The above objects are of a most praiseworthy character. There is good work, and plenty of it, to do along the above lines. It is only too true that many municipalities make but scant provision for their destitute poor. There is a strong desire, in many places, to unload the common duty, in this respect, on to the generosity of the individuals who take an interest in the needy sufferer.

There are some persons who impose upon hospitals. They are hospital inhabitants. They go from one hospital to another, seeking shelter and attendance. Something may be done by the Association to rid the hospitals of the expense of caring for such imposters. When once detected, they should be watched.

The Association might also do a good service for the medical profession by putting an end to the abuse, now prevalent, whereby a person of means takes a bed in a public ward and claims free medical and surgical attendance. To save expense he takes the cheapest accommodation, and pays the doctor nothing. In all cases where the patient is not admitted under an order from the municipality as a pauper, he should be required to pay for his medical attendance. This should apply also to persons placed in a hospital by societies and corporations. The governing bodies would do well to apply the rule of free attendance only to certified charity cases. They would only be doing justly by their medical staff to exempt the latter from giving free attendance simply because the person or his friends chose a public ward. It is to be hoped that this abuse will soon cease. Hospitals should not do anything that would deprive the medical profession of its legitimate fees. In this regard there should be perfect accord between the governing bodies of the hospitals and the members of the profession.

In all cases where patients pay for their maintenance in a hospital they should be free to select their own medical attendant. Such medical attendant would be required, however, to observe the rules of the hospital.

PERSONAL.

Dr. Thomas W. Irwin, of Pembroke, died suddenly on 12th November, 1902.

Dr. Barr, M. P. P., for Dufferin, has recovered from his recent injury.

Dr. Devine has been appointed professor of Materia Medica and Therapeutics in Manitoba Medical College.

Dr. R. J. Dwyer, of Toronto, has passed the examination for the diploma of M. R. C. P., London.

Dr. G.C. Stephen, of Montreal, and a brother of Lord Mountstephen, died suddenly of heart disease in London, Eng., at the age of 43.

Dr. R. A. Davies, who practised at Easton's Corners for many years, died at Ottawa on 2nd December. He was in his 60th year.

Dr. D. Brochu, of Quebec, who is President of the Association of French Physicians of North America, was banquetted a short time ago by his medical friends.

Dr. Brock, of Guelph, the representative of the Wellington and Waterloo district, entertained recently several members of the Council and other medical gentlemen.

Dr. J. A. Ferguson, who was the recipient of the Royal Humane Society's medal, died at Ottawa, 19th November, 1902. He was 29 years old.

Dr. J. M. Forster, Assistant Superintendent at the Mimico Asylum, has gone to Britain for three months to study mental and nervous diseases.

Dr. T. A. Starkey of the University College, London, England, who was recently appointed Professor of Hygiene at McGill University, Montreal, has arrived in that city to assume his professional duties. Dr. Starkey was graduated from University College in 1894. After serving for a short time as interne in the Brompton Hospital, he went to India, and from 1899 to 1901 was stationed at Bombay, working under the famous bacteriologist, Haffkine, in the Imperial Research Laboratary. Since his return to England he has been pursuing his public health work in the laboratories of University College, London.

BOOK REVIEWS.

A BEAUTIFUL CALENDAR.

THE New York Pharmacal Association have issued a handsomely illustrated calendar, which is given with compliments of Lactopeptine.

MERCK'S INDEX.

THIS is a large octavo volume of 375 double-column pages. It is got up in excellent form. It gives a complete list of preparations and their origins, natural history, and composition. The work is arranged alphabetically and contains a vast amount of very useful information on pharmacology.

ELECTRO-THERAPEUTICAL PRACTICE.

A ready reference guide for physicians in the use of Electricity Seventh Edition, revised, rewritten and greatly enlarged. By Chas. S. Neiswanger, Ph. G., M. D., E. H. Colgrove & Co., Chicago, 1902.

THIS is a handsome volume 200 pages, bound in limp leather, and interleaved for notes. The book covers the science and practice of electro-therapeutics in a brief but thorough manner. The various books on electricity and all kinds of electrical appliances, mentioned in the work, can be procured through the McIntosh Battery and Optical Company of Chicago.

SYPHILIS—A SYMPOSIUM.

Special contributions by L. Duncan Bulkley, A.M., M.D.; Follen Cabot, Jr., M.D.; Louis A. Duhring, M.D.; Prof. Fournier, M.D.; Eugene Fuller, M.D.; E. B. Gleason, M.D.; William S. Gottheil, M.D.; Robert H. Greene, A.M., M.D.; J. B. Thomas, M.D.; Norman B. Gwyn, M.D.; Orville Horwitz, M.D.; Thomas G. Morton, M.D.; Edward L. Keyes, M.D.; G. Frank Lydston, M.D.; D. J. McCarthy, M.D.; Boardman Reed, M.D.; A. Robin, M.D.; $1.00, 1902. New York: E. B. Treat & Co., 241-243 West 23rd Street.

THIS work is made up of a series of papers prepared for general practitioners by syphilographers of large experience; and also includes answers to a series of questions by eminent specialists. All the articles are clear and concise, and give the most recent and exact information on the different phases of the subject. Besides this, there are chapters devoted to syphilis of special organs. The workmanship on the book is excellent and we can heartily recommend it, as being one of the most up-to-date work on the subject.

BIOGRAPHICAL CLINICS :

Origin of the Ill Health of De Quincy, Carlyle, Darwin, Huxley, and Browning, by George M. Gould.

THE above is the title of a book to be issued by Messrs. P. Blakeston's Son & Co., at an early date. The work will be a very interesting and instructive one. The distinguished another takes the view that the ill health of these writers was due to eye strain. He makes out a strong case.

A REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES.

Embracing the entire range of Scientific and Practical Medicine and Allied Science by various writers. A new edition completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City, Vol. 1. Illustrated by numerous chromolithographs and four hundred and ninety-eight half-tone and wood engravings. New York: William Wood and Company.

TO all who are acquainted with the former edition of the Reference Hand-Book of the Medical Sciences, the present edition will need but little introduction. A perusal of volume one of the second edition convinces one that it would be well nigh impossible to imagine in what way it could have been improved. We have here a large volume, 9 inches by 11½ inches, and consisting of 800 double column printed pages. The entire make-up of the book is an expression of all that is ideal in the book making art. including binding, paper, type and illustrations. With regard to the colored plates, they may well be called superb. The half-tone and wood engravings are in every respect of a very superior character. Excellent, however, as these features of the volume are, it is not until the reading matter is examined that the real value of the volume becomes apparent. The articles are of a very high standard of merit; and are regulated in length with great care, from the stand-point of the subject discussed. The literary and scientific qualities of the articles are all that could be desired. The first volume gives a list of contributors making up four pages. The articles are arranged alphabetically, and cover A and B. For readiness of reference and reliability of matter, it may be safely said that there is no other single work equal to the Reference Hand-Book of Medical Sciences.

MISCELLANEOUS.

THE USES OF ANTIPHLOGISTINE.

DR. C. C. PARTRIDGE, writing in *American Surgery and Gynaccology*, for October, 1902, speaks highly of the value of antiphlogistine in a case where there were puerperal septicaemia, double pneumonia and an abscess of the thigh. Antistreptococcic serum and saline solutions were used. The antiphlogistine was applied over the lungs, the hip, and the lumbar and sciatic nerves. The abdomen became distended, and it was applied here also. The patient got well.

GUDE'S PEPTO-MANGAN IN ANÆMIA.

DR. ENRIQUE Diago, Havana, Superintendent of Hospital, No. 1, Havana, Cuba, *in Progresso Medico* for April, 1902, recommend Gude's Pepto-Mangan for anæmia. Along with Dr. José. F. Benetez, chief of the Laboratory, he has made some careful investigations on the improvement of the blood under the administration of the Pepto-Mangan. The quality of the blood, especially the number of red corpuscles increased with marked rapidity.

ERGOAPIOL.

ERGOAPIAL (Smith) is a compound of ergot and the active principle of opium petroselinum, and other valuable drugs. It is highly recommended for amenorrhoea, dysmenorrhoea, delayed menstruation, foetid and scanty menstruation. M. A. Auerbach, M. D., and W. A. Weightman, M. D., speak in the highest terms of this combination in the above conditions. It has proven of much value, after confinement, to bring about complete involution. One capsule should be given every four hours, with some milk or water. It is non-toxic and does not cause digestive derangements.

NATURAL CARLSBAD SALTS.

THESE natural Carlsbad salts, which bear the trade mark and signature of "Karlsbader Mineral wasser versendung Löbel Schottlander," consist of the genuine saline constituents of the Sprudel springs at Carlsbad. They thus differ from certain other salts, which, though passing under the name of Carlsbad are really combinations of the similar salts, but derived from quite a different source. With the exception that the earthy carbonates have been removed, the dried Carlsbad salts when re-dissolved in water present exactly the same chemical combination as occurs in the Sprudel spring. It is unnecessary to enter into the therapeutic properties of these salts; but in all cases in which a "cure" at Carlsbad is indicated, the taking of these salts at home offers a good substitute for the use of the waters. The Natural Carlsbad Salts

are prepared in crystalline and in powder form. The dose is one teaspoonful taken either in hot or cold water the first thing in the morning.—*Ingram and Royle, London England.*

RELATIVE VALUE OF MALT EXTRACTS.

CHEMICAL analysis has shown that wheat and oats contain much larger proportions of albuminoids and nitrogenous elements than barley. Gluten, which is found very abundantly in wheat, is the most nutritious element obtained from the cereals, and the only vegetable substance that will support life indefinitely. Wheat contains from 15 to 35 per cent of gluten. Its proportion in other grains is insignificant (see Flints Physiology of Man) The nitrogenised principles of wheat and oats *when malted* are more soluble than they are in barley, and therefore dairymen will pay for the refuse grains from malted barley whereas they will not accept the refuse grains from malted wheat and oats as a gift.

It is for these reasons that "Maltine" (malted wheat, oats and barley) contains so much larger proportions of constructive nutritive properties than the best extracts prepared from barley alone. The reason "Maltine" contains so much larger proportions of the digestive principle,diastase,than the ordinary extracts is because the gluten and cerealine in the malted and wheat have sufficient power to convert all the starch of the three cereals into sugar leaving the unemployed diastase of the wheat oats and barley in the Maltine. Gluten and cerealine act as powerful ferments, transforming starch first into dextrine, and then into sugar (see Flints Physiology of Man and Watts' Dictionary of Chemistry)

Baron Von Liebig said: "wheat and oats stand first among our list of cereals in combining all the elements in proportions necessary to support animal life. They are especially rich in muscular and fat producing elements."

Prof. Austin Flint, Jun., held that "wheat must be considered as by far the most nutritious of all grains."

Prof. Thos. King Chambers, F.R.C.P. Lond., stated that "barley and rye are inferior in nutritive power to any of the other cereals."

John Attfield, F. C. S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain,remarks that "maltine contains unempaired, and in a highly concentrated form, the whole of the valuable soluble materials which it is possible to extract from either malted wheat, malted oats, or malted barley."

"It is unrivalled as a natural solvent of bread, pastry, and all other farinaceous food, and is, therefore, an invaluable aid to sound and healthy digestion. No better preparation of malt has ever yet been manufactured,"

THE LATE BERTRAM SPENCER, M.D., M.R.C.S., ENG.

Professor of Medical Jurisprudence, and Associate Professor of Clinical Surgery, Medical Faculty, University of Toronto.

THE LATE A. Y. SCOTT, B.A., M.D., C.M.

Professor of Botany, Ontario College of Pharmacy, Toronto.

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A CASE OF ACUTE PRIMARY THYROIDITIS.

By E. R. SECORD, M.D., Brantford.

THE following case, which occurred during my term of service at the John H. Stratford Hospital in this city, seemed to present enough peculiar and interesting features, to warrant its being placed on record.

Mrs. E., æt., 41, Anglo-Saxon, admitted July 19th, 1902, complaining of weakness; cephalalgia, chiefly frontal, but also down the nape of the neck; anerexia; constipation; and pain in a goitre with increase in its size.

Personal history. The patient is a married woman of thirty-one years. She is the mother of three children. Her general health has always been good, having had no illnesses other than those peculiar to childhood. She has always been able to do her own house work.

For about twelve years back she has had a "swelling of the neck," roughly speaking of about the size of a large lemon, situated nearly in the middle line anteriorly, which had never given rise to any trouble other than the discomfort occasioned by a tumour in that situation. She had, however, noticed that when working hard, or when walking fast there was some dyspnœa, and also some palpitation of the heart.

In the spring of the present year, the patient had moved into a house where typhoid fever had been particularly prevalent during the fall previous, and where well water was the only source of supply for drinking purposes.

For the past few weeks she has been suffering more or less continually from headache, especially in the occipital region, her appetite has been gradually failing, constipation becoming marked, and chilly sensations have appeared, without however any distinct rigor. There has never been any epistaxis.

Present Illness. On the 17th inst. the headache became worse, and the goitre which had previously given no trouble became somewhat tender and swollen. She was seen by her medical attendant, and on the 19th inst. was sent into the hospital with a diagnosis of probable enteric fever.

Present Condition. General: Face pale, with red patches the size of a silver dollar over each malar eminence, eyes somewhat prominent,

slight tendency to sordes, intellect slightly dulled, but no active delerium. She is most comfortable when lying on her back, with head slightly elevated by pillows. Temp., 103 deg. F. Pulse, 120. Respiration, 30.

Gastro-intestinal System: Tongue coated with thick white deposit. It has a distinct somewhat fine tremor, such as is often seen during the the onset of typhoid.

Anorexia marked, but no tendency to emesis.

Abdomen is flat, and slight generalized tenderness is present.

There are no rose spots, and no iliac gurgling.

Spleen is distinctly palpable, just below the left costal border. The percussion dullness is similarly enlarged.

Respiratory and circulatory systems, normal.

Neck: A large multilobular cystic thyroid gland is present, with the largest collection of cysts apparently springing from the isthmus, and projecting forward and downward between the sternal portions of the Sterno-Cleido-Mastoids. This portion of the mass is about the size of an orange. Springing from the upper boarder of the left lobe is another smaller mass forming a distinctly separate nodule about the size of a walnut. At the upper border of the median mass is a small area where, on deep pressure, decided tenderness can be elicited. There is no hyperæmia of the skin, nor adhesion of it to the underlying mass, nor can fluctuation be distinctly made out.

Diagnosis. The diagnosis apparently lay between typhoid fever, with inflammation of the cystic thyroid as a complication, and acute primary thyroiditis.

The history and appearance of the patient strongly favored the former, as did also the rareness of thyroiditis as a primary affection, and its comparatively common occurrence secondarily to the infectious fevers.

A blood specimen was taken and tested for the Widal reaction, but with an entirely negative result.

A hypodermic needle was then introduced into the most prominent part of the cysts, under strict aseptic precautions, and mucoid substance, slightly stained with blood, was withdrawn.

Course. For a week the temperature remained at about the same level, presenting, however, remissions down to 100 deg. F. The Widal reaction remained absent, and the pain in the neck disappeared under ice applied locally. At the end of this time the continued absence of rose spots and of blood reaction rendered the diagnosis of enteric fever less likely. A needle was again introduced into the cyst, and this time thick

muco-pus was withdrawn. The cyst was then thoroughly laid open under cocain anaesthesia, the pus—about an ounce and a half in quantity —evacuated, and the cavity swabbed out with pure carbolic acid followed by alcohol. The temperature immediately fell to normal, where it remained, and the cyst cavity rapidly filled up with granulation tissue.

After treatment.—As there was still quite a large multicystic mass present, which caused some dyspnoea especially on exertion, and as there was slight prominence of the eye-balls, though none of the other symptoms of exophthalmic goitre were present, the removal of the cyst was decided on, and was carried out two weeks later under chloroform anaesthesia. The method adopted was that of enucleation of the cyst from the surrounding capsule of gland substance as described, and so successfully carried out by Dr. F. J. Shepherd, of Montreal. The opera-

Multiple Cystadenoma of Thyroid. In larger collection of cysts note caseous debris, filling the old abscess.

tion presented no especial difficulties, the enucleation being easily brought about, and the haemorrhage from the capsule slight and easily controlled. The "dead space" was packed lightly with iodoform gauze, which was removed in forty-eight hours. The wound healed throughout by primary union, and the patient was discharged on the tenth day.

I had the opportunity of seeing the patient again about two months afterwards, and the result was exceedingly gratifying. She had gained ten pounds in weight, suffered no more from the palpitation and dyspnoea, and the exophthalmos was entirely absent.

The specially interesting features of the case were :

(1) The apparently idiopathic nature of the inflammation. There was absolutely no history of trauma, nor was there any evident point of entrance for the pyogenic organisms.

(2) The remarkable similarity between the symptoms and those of a severe case of early typhoid.

(3) The simplicity, ease, and safety of the enucleation operation as compared either with partial or complete thyroidectomy.

In reviewing the literature of the subject, I am able to find very few and imperfect references to the condition. Various text-books make the assertion that thyroiditis is rare, usually occurring in the course of typhoid fever or some other infection, that the condition is very uncommonly primary, that when it does so occur it usually goes on to resolution, and that suppuration in these cases is decidedly rare.

Tavel, of Berne, writing from Kocher's clinic, has issued a monograph (1) entitled "Uber Die Atielogie der Strumitis" in which he divides the cases into two groups :—(a) those depending on direct infection, (b) those of hæmatogenic origin. Doubtless my case was of the second-class, but the point of entry for the infection is more difficult to determine.

According to Lebert whose classical article was published in the Krankh. der Schild-druse (2), suppuration ensues in 60 per cent. of all cases of thyroiditis, and 25 per cent. of all cases are fatal. From the cases reported in recent literature, the proportion of suppuration would not seem to be so large. In this connection Kocher (3) reports twenty-four cases of strumitis, (presumably suppurative) in eleven of which aspiration, electrolysis, or interstitial injections had been carried out, and in six more other definite predisposing causes were present. In my case although aspiration was practised, still it was only under absolutely aseptic precautions, and the fact that the temperature range, before and after the aspiration was identical, precludes the possibility that the suppuration depended on the aspiration.

As an example of the hæmatogenic group above noted may be taken Oulment's (4) report of a case of suppurative thyroiditis, followed by pyæmia and death, occuring during the menstrual period ; in which he expresses the opinion that the infection may have come from the uterus.

Cases of primary thyroiditis terminating in resolution are apparently more common. John H. Bradshaw (5) reports a case of this character which ran an afebrile course. Before the Societè Medicale des Hepitaux, M. Gallard (6) reported a case, also apparently of primary inflammation of the thyroid, accompanied by fever and rapid pulse. This case terminated in resolution, though there were several attacks of palpitation and tachycardia (128-140 per min.) subsequently. In the *Brit. Med. Jour.* is reported (7) the case of a child who had been suffering from a nasal catarrh, and who developed sudden enlargment of the thyroid, with a temperature of 103 degrees. Treatment by leeching, etc. brought about resolution. Here the infection may have been from the pharynx.

Suppurative cases, when allowed to go unoperated on, may bring about peculiar results. Thus Remaine (8) describes a case of spontaneous cure of a goitre brought about in this way, and Lejars and Leroy (9) have reported a suppurating cyst of the thyroid with adhesions to and ulceration of the cervical blood-vessels.

In America, Delafield (10), Musser (11), Lydston (12), and Ransohoff (13) have reported cases. Of Ransohoff's cases, one followed one week after convalescence from typhoid, while the second followed the breaking off of the point of a needle while making an injection. In this case evacuation of the abscess was followed by sinus formation, which persisted for some months. This complication is a fairly common occurrence and is due apparently to the difficulty of securing collapse of the thickened cyst wall. Thus in my case although the cavity had apparently filled by granulation, when the cyst was afterwards removed, the abscess cavity was seen not to be healed but to be filled with a caseous debris. This condition is well shown in the accompanying photograph.

Ransohoff lays great stress on the danger of violent hæmorrhage, following the evacuation of the pus, and says that "from no other abscesses are recurrent hæmorrhages so common". This feature was not marked in the case above reported. If it should occur, especially when one considers the danger of sinus formation following in any case, partial or complete thyroidectomy would seem to be justifiable.

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ASPIRIN IN GLYCOSURIA AND DIABETES MELLITUS.

DR. R. T. WILLIAMSON, of Manchester, writing in the *British Medical Journal*, of Dec. 27, speaks highly of the value of aspirin in the above conditions. He commences with ten grain doses two or three times a day, increasing to fifteen grains four or five times a day.

CONTUSION OF THE ABDOMEN.*

By GEO. S. RENNIE, M.D., L.R.C.S. Edin., L.R.C.P. Lon.

ABDOMINAL contusion with its accompanying symptoms and sequelæ is, to my mind, a most important subject, but one that is not discussed or written upon as frequently as it should be. It is for this reason that I wish to draw your attention to this injury, in order that interesting cases of this kind may be reported. I find on looking up the literature very little on this subject, and I may say my own experience with injuries of this kind is very limited, and I shall only report two cases of interest. The first one, A.C.M., is, strictly speaking, a contusion of the abdomem with complications, as the history will show; the second was a contusion of the abdomen with also a lacerated wound, but this second case is so closely allied to the subject of my remarks, that I trust you will pardon my giving its history under the heading of this paper.

Case 1—A.C.M., on the night of Feb. 23rd, was at work coupling cars when he slipped on the ice, and fell between two cars as they were coming together with great force; he was standing sideways and was caught in the coupling about the middle of the body. The coupling was made and his clothing and abdomen were caught in the coupling. He was conscious and called for help; his fellow workmen tried to liberate him from the coupling by opening it with the dogs provided for this purpose on opposite sides of each car, but this they were unable to do, using all their force; and in order to liberate him it was necessary for the engineer to back up by signal, when he was released.

He was conscious all the time, suffering extreme pain, and stated that his eyes were starting out of his head. He was given $\frac{1}{4}$ grain of morphia hypodermically, and sent to the hospital. On examination it was found that the patient was severely bruised from the lower margins of the ribs down to the pubes; on the right side over the os innominatum, the skin was broken, and there was very severe bruising, the bruising extending also into the thighs, the right one being severely bruised over the great trochanter; no marks of violence on the back.

He had hæmorrhage from the ears, nose and mouth, although there was no violence applied to the body above the lower ribs or below the upper part of the thighs; he had extensive subcutaneous hemorrhages in the conjunctivae of both eyes, they being chocolate in color; and extensive hemorrhage into the eyelids and tissues around the eyes, extending down over each malar bone.

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*Read before the Hamilton Medical Society.

His perinæum was ruptured and a portion of the rectum protuded. This was returned and the perineum stitched with silkworm gut. He had purpuric spots all over his chest. Temperature 96 4-5, pulse 99, Complained of much pain in the abdomen, feeling of nausea, pain in eyes, and felt as if they were starting out of his head. Hot compresses applied to abdomen, morphia, strychia, and spts. frumenti given for the first few hours.

Feb. 24th. Temp. 100, pulse 120, bowels moved after an enema, complains of pain and nausea, hurts him to breathe, abdomen looks much worse as bruising becomes more apparent. Feb. 25th. Temp. 99½, pulse 100; bowels moved after an enema, great pain in abdomen with nausea; takes milk, beef tea, and stimulants at regular intervals. Condition, remained about the same, temp. normal, pulse 100, to March 1st, when whole abdominal wall appears to be pulpy, shakes on movement like a bag of jelly; whole abdominal wall simply bathed in pus, bowels move regularly. March 3rd., abdomen is somewhat distended. Riecti muscles seem to be separated and patient experienced a sensation like as if something had given way. Patient feels nauseated, takes nourishment regularly but breathes very rapidly at times, and bowels move regularly. March 5th., large superficial slough on abdomen, he feels weak and exhausted. March 8th, cannot retain food, vomits immediately after; temp 99, pulse 120. March 11th., patient getting nutritive enemata, abdominal wall has lost its pulpy, jelly-like appearance; he is restless and dispondent; temp. 99, pulse 126. March 13th, patient has grown weaker, slough separating from the abdominal wall, pulse weak, takes a little nourishment by mouth, occasional reaching and vomiting; bowels move regularly. March 15th, patient very weak and cannot take nourishment; temp. 99½, pulse 150, is unconscious for some time before death.

Report of autopsy upon the body of A. C. M., aged 35, March 15th, 1902.

External Appearance. Body is that of a male 5 feet 8 inches in height, considerably emaciated. The abdomen is sunken and covered with small hæmorrhagic spots. There is considerable staining of the anterior and external surfaces of the right flank and hip, the result of bruising received *ante mortem.* The left flank and hip are stained anteriorly, apparently from the same cause. The entire abdominal surface from the lower costal margin to the pubes is in an ulcerated condition, showing evidence of an attempt at repair. Posteriorly, hypostatic congestion is noticed. There is a purplish discoloration upon

the dorsum of the right foot over an area of 3 by 5 inches. A slight scar is seen in the perineum 1½ inches in length. The conjunctivae are hæmorrhagic, but show evidence of partial absorption of the effusion. Rigor mortis is not well marked.

The usual incision made and the abdomen opened.

Abdomen. On examination of the abdominal parietes the muscular layer is observed to be completely separated from the cutaneous and subcutaneous tissues. There are a few recent inflammatory adhesions on the left side of the incision in the neighborhood of the umbilicus, extending downwards and outwards. Otherwise there was no attachment between the musclar layer and the cutaneous and subcutaneous layer. Minute hæmorrhages involving the whole of the abdominal wall exist in the subcutaneous and musclar tissues. On the peritoneal surface of the abdominal wall there are very numerous hæmorrhagic areas, while in the more dependent parts the staining is diffuse, some of the discoloration being comparatively old, while other areas are of more recent production. In the pelvis, the staining is very diffuse, much more extensive and evidently of longer duration. There is considerable extravasation between the bladder and the pubic arch.

Abdominal Viscera. The great omentum does not occupy its usual position in front of the testines, but is entirely invisable. The coils of intestines appear flattened and more or less discolored in dependent parts. The sigmoid flexure is much longer than normal, W shaped, and much more darkly stained than the rest of the intestines. The remainder of the intestines, so far as can be seen, with the exception of the two darkly congested knuckles, in dependent positions, present a fairly normal appearance. In the mesentery there are numerous small hæmorrhages, mostly of recent date. Four inches from the ileo-cæcal valve there is a tear in the mesentery two inches long, with edges healed and showing signs of repair of some duration. Above this tear are signs of recent haemorrhage in the mesentery. Some post mortem biliary staining is noticed in the region of the gall bladder, involving the coils of intestine in the vicinity of the hepatic flexure.

Gall bladder, two and one half times normal size and distended with fluid. Examination reveals no obstruction in the duct.

Spleen, dark, somewhat enlarged, weight 6½ ounces.

Liver, normal, except for a few bruises along the anterior surface of the lower edge of the right lobe. Some post mortem staining; weight 62½ ounces.

Left kidney, slightly larger than normal. Some old hæmorrhages upon its surface. Capsule strips readily. Slight hæmorrhage under the capsule. On section, cortex appears thin and somewhat congested.

Right kidney, normal in size. Superjacent peritoneum is filled with blood clot, some of which is recent and some of old standing. Capsule strips easily. Some underlying hæmorrhage. On section, the cortex is seen to be narrow and there is some dark fluid blood between the pyramids. Calices full of clear urine.

Descending colon is contracted.

Thorax.—Where the thorax is opened the left lung is seen to be compressed into the apex of the left pleural cavity, and an opening two inches long is observed on the left side of the diaphragm, immediately to the left of and slightly anterior to the vertebral column, through which the stomach, great omentum, 14 inches of the transverse colon, a portion of the descending colon and the transverse mes-colon have passed. There are some recent adhesions between the viscera and the pleura. The left lung is firmly adherent to the parietal pleura along a surface extending backward from the axillary line. The lower lobe is collapsed, atelectatic and shows hypostasis, the upper lobe is pale and emphysematous.

Right Lung, emphysematous along the anterior border. Considerable hypostasis posteriorly.

Pericardium, contains normal amount of fluid, no adhesions.

Heart, somewhat smaller than normal and well covered, particularly on the right side with a deposit of fat. Auricles and auricular appendices, normal. Left ventricle, firmly contracted and empty, somewhat smaller than normal. Right ventricle, slightly contracted, normal. Tricuspid valve, cusps slightly thickened on free border. Pulmonary valves, normal. Mitral valves, present thickened borders and surfaces. Patchy atheromatous change is seen. Aortic valves, normal. All the valves of the heart are normal in function and appear perfectly competent when subjected to the hydrostatic test. Aorta, patches of atheroma above the openings of the coronary arteries.

Case No. 2, L. J. Patient was a strong, robust man. When working in a factory at 9.30 a. m., July 24th, he was engaged in putting a belt in place with a pole, when the pole became caught in the moving belt, and the end of it came with great force against him, and penetrated his abdomen on the left side of the middle line and about three inches below the costal margin.

The patient was sent to the hospital and prepared for operation. On examination there was found a contused area about 3 x 4 inches below the left costal margin, extending from which there was a wound running obliquely downward for about three inches. The index finger on being pressed into this wound, entered the abdominal cavity. The

wound was enlarged in a downward direction, and on examination of the abdominal viscera, a tear was found in the descending colon, from which fæcal matter had escaped into the abdomen. This wound passed transversely across the bowel for three inches. This opening was closed by using fine silk and Lembert sutures. The abdominal cavity was then carefully examined for other injuries. A large portion of the great omentum was found badly contused; this was ligatured and then cut away. No other injury was found to any of the abdominal viscera. The abdomen was then thoroughly irrigated with sterilized water, a glass drainage tube was placed in position, and the abdominal wound closed with silk worm gut sutures.

The drainage tube was cleared by means of a syringe every hour for the first eight hours, as the discharge was fairly copious and slightly tinged with blood. The patient's condition following the operation was fairly good. A quart of saline was given per rectum.

During his illness his temperature and pulse practically never went above normal. The tube was removed two days after the operation, and the loose sutures that were put in position at the time of operation, tied. Ten days after the accident, an abcess formed in the abdominal wall, at the site of the contusion mentioned at time of the first examination. This was opened and a quantity of pus escaped, the cavity was drained, and was healed in ten days. The patient made an uninterrupted recovery, was discharged from the hospital, August 27th, one month and four days from the time of accident, and returned to work ten days later.

Now let us review these two accidents, and their results. Case 1 is most interesting, but unfortunately, terminated fatally. In this case it was quite impossible to diagnose the conditions found at the autopsy; we had the history of the severe force causing the accident, the injury was apparent, his bowels moved regularly, and he took nourishment regularly, had for a time practically normal temperature, and his pulse for days was not rapid. Even if the condition of affairs could have been diagnosed, it would have been impossible, in this case, to have operated with success, as the abdominal wall was simply bathed in pus, and the tissues underlying macerated in it. Under these conditions, it would have been impossible to have done an aseptic operation unless it had been done directly after the injury. If an operation had been performed at this time, I do not consider that it would have been successful, as the tissues of the abdominal wall sloughed later on, and consequently there would have been a septic condition set up intra peritoneally.

Taking these things into consideration, and taking for granted that an operation could have been done aseptically, and without later infection

of the peritoneal cavity, it would have been impossible from what was found at the autopsy, to have saved this patient's life, because it was with great difficulty, even post mortem with that large incision, that the abdominal organs could be removed from the chest cavity; the hole in the diaphragm having to be considerably enlarged. One rather striking point in this case is the course the food had to take before reaching the rectum; passing from osephagus in the abdominal cavity, it passed into the chest cavity, into the stomach, passing from the stomach it entered the small intestine in the abdominal cavity, passed through the small intestine to large intestine, from abdominal cavity to chest cavity in transverse colon, and back to decending colon in abdominal cavity, he taking nourishment daily and his bowels moving daily for a period of twenty-one days.

The second case, L. J., points directly to the advisability of operating and operating early. In this case we might just as well have found the intestinal injury presented without any wound of the abdominal wall. In this case there was an extensive contusion and quite sufficient to have caused the rupture of bowel or some abdominal organ.

It might be well to refer briefly to the causes, symptoms and treatment of cases of this kind; kicks of horses, railway casualties, and run-over accidents probably account for the great majority of cases of visceral rupture, the external signs in many cases may be slight, while the internal wounds may be extensive.

The symptoms of abdominal contusion with involvement of viscera, are fairly uniform. The temperature falls below normal, skin cold, anxious expression, rapid, thready pulse, rigidity of abdominal walls, localized tenderness, often retention of urine, and frequently apprehension of death.

We have the history of the accident, and the symptoms as mentioned, which are those of shock and abdominal rigidity;—muscular rigidity of the abdominal wall is pretty constant in visceral injuries. Keenan found it in 84 per cent. of his cases, Hartmann regards muscular rigidity as so positive a sign that he makes an exploritory incision even in absence of other signs, and justifies his statement by reporting ten cases of which nine were operated upon successfully, and in all of which visceral lesions were found. In the remaining case which refused operation, death ensued and an internal perforation was found post mortem.

Besides muscular rigidity, we have abdominal tenderness, varrying according to the site and degree of local injury to the abdominal walls. It is present over the local contusion, and this deprives it of much value in diagnosis.

Vomiting is present in most cases as was with A. C. M., case 1, but of the cases I have been able to review, vomiting appears to be no sure indication of serious damage to the stomach or intestines. Blood streaked stools likewise may be suggestive, but not absolutely diagnostic. Blood in the urine, on the other hand, is a much more reliable indication of lesion of the gento-urinary tract.

Abdominal distention is generally a later development, and may point to the advent of peritonitis. Signs of free hemorrhage within the abdomen point rather to lesions of the mesentary or solid viscera.

The diagnosis of visceral lesion can only be made by exclusion. and to be complete you must make an exploratory incision; this procedure should be advocated when doubt exists.

The progress depends upon the organ injured, the character of the injury, the presence of multiple lesions, the presence of infection, the character of the infecting agent, and upon the age and general resisting power of the patient.

Makins gives a table of 292 cases showing the relative frequency of injury to the different visceral organs; of these the intestines were the the seat of injury in 23.59 per cent., the bladder in 5.61 per cent., the mesentery in 3.57 per cent., the spleen in 11.23 per cent., the liver in 16. 85 per cent. and the kidney in 3.32 per cent.

To sum this subject up, from the information I have been able to gather, and from cases of my own, I would say:

1 Contusions of the abdominal wall are deceptive in their character as regards the viscera.

2. The seriousness of the case is often overlooked.

3 Exploratory operation is not only safe, but is our only means of arriving at a correct diagnosis, and should be performed in the majority of cases showing evidence of internal injury.

4 Operate by all means early.

Dr. Palmer's many friends will be glad to learn that he is around again, after the severe attack of septicaemia which he contracted while performing an operation. The present indications are that his hand will regain a large measure of its usefulness.

FOUR CASES OF HERNIAE.

By THOMAS J. F. MURPHY M.D.,
Visiting Surgeon, Victoria General Hospital, Halifax, N. S.

THE following four cases were operated upon at the Victoria General Hospital and may be interesting.

C. D., 58 years, stevedore, came to the Victoria General Hospital, July 1st, 1901. He gave a history of a small hernia which had existed for about 13 years and which had suddenly become enlarged after exertion. He had used all manner and kinds of trusses and had been sent to hospital by Dr. Hogan for operation. On examination, we found a scrotal hernia, on the right side, quite as large as the patients head, his condition amounted to total disability. In the recumbent posture it was impossible to reduce all of the hernia, although there was no constriction at the inguinal opening. The patient had been treated the year before in this institution for bronchitis and emphysema, he was very fat and had a large pendulous abdomen, general condition pretty fair, the patient demanded an operation, and we explained the danger and difficulty to him, but he persisted acting on an idea taken from an article entitled "Note on mortality after operation for large incarcerated herniae" Annals of Surgery, Jan., 1900. I placed the patient in bed with the foot of the bed slightly elevated, and kept him on very low diet. In six days the hernia could be easily reduced, operated on July 8th, 1901. Chloroform was used first on account of the emphysema, but was soon abandoned for ether. He took the anaesthetic badly, was never thoroughly under and coughed, gagged and strained all through the operation. The sac was opened and ligated as high up as possible and resected together with the testicle and cord. The hernial orifice was closed, much after the Bassini method, with the difference that the external oblique was attached to the ligament so as to leave a little of the latter overlap to which was attached a portion of the sheath, of the Rectus. Kangaroo tendon was used for the muscles and the skin was closed with silk worm gut, a drain of the same material being left in on account of the amount of fat present. I was also afraid of skin infection for there was a slight excema present in the creases. The skin sutures and drain were removed on the eighth day. Slight serous and fatty discharge persisted but care was taken to preserve the integrity of the buried kangaroo tendons by injecting a four per cent solution of formalin through the sinus left by the drain. The patient was kept in bed and the discharge persisted from the sinus. On August 9th, cystitis set in which lasted 10 days, on September 11th opened sinus and swabbed out with pure carbolic followed by alcohol. Oct. 18th, another attack of cystitis, followed, on Oct. 22nd, by an attack of phlebitis of the left leg. Patient discharged cured on November 12th, 1901. At the present

moment November 21st, 1902, the patient is in good condition. There is no recurrence of the hernia and the abdominal wall seems strong. The patient has been working at his business I intend to particularly follow up this case and will report again upon it.

Mrs. S. W. aged 45 years, married, came to Victoria General Hospital, June 5th, 1900, complaining of oblique inguinal hernia and cyst of the round ligament, the hernia had troubled her about 10 years, about three weeks after the appearance of the hernia, the cyst began to grow until it had reached its present size, which is about that of an average orange. Bassini operation, June 18th, 1900, was done and the cyst removed, patient was discharged cured, July 17th.

Mrs. A., married, multipara, admitted to the Victoria General Hospital, April 4th, 1901. This case resembled the other in almost every particular and will not be reported in detail, she was rather run down and was not operated upon until April, 28th 1901. Discharged, cured, May 25th, 1901.

E. W., male, 9 years, admitted August 13th, 1902, complained of tubercular disease of the right hip joint, and inguinal hernia owing to the patient's crying and straining a good deal. it was thought advisable to operate on the hernia, operation Sept 24th, on cutting upon the sac, no cord could be found, on opening the sac, the cord was found to be in the centre of, and not connected with the sac except at the lower portion where it joined the testicle. The veins were easily separated and had no investment of any kind in the sac. There was a little omentum which was returned. We were careful in closing the peritoneal opening not to constrict the veins too tightly. The sac was excised, and the operation finished after the Bassini method. Subcuticular stitch of silk worm gut was used, over this collodian. Stitch removed on 7th day. Case has since done well.

The following case occurred in private practise. Mr. G. R. 92 years of age, male, had had hernia for 40 years, became strangulated, August 10th, 1901, operated August 11th, 1901. Dr. John Stewart assisted me at the operation which was done under eucaine, the bowel was easily reduced and some of the omentum cut off. The stump was sewn into the internal ring and made to act as a plug. No attempt was made to do a radical cure, as the tissues were thin and feeble and not possessed of much vitality. The old gentleman was very unreasonable and hard of hearing, and had been troubled for years with enlarged prostate. He urinated over the dressings, he took the dressings off twice, the skin sloughed slightly but soon healed. Cystitis set in. He recovered from the hernia only to die of the cystitis six weeks after operation.

TONSILLAR HYPERTROPHY, ITS OPERATIVE TREATMENT, AND THE COMPARATIVE VALUE OF THE DIFFERENT METHODS:*

By PERRY G. GOLDSMITH, M.D., Belleville, Ontario,

Fellow British Laryngological Rhinological and Otological Association. Late Registrar, Central London Throat and Ear Hospital; Oculist and Aurist Ontario Institute for the Deaf and Dumb, Belleville.

THE faucial tonsils are two glandular organs, situated one on each side of the fauces, between the anterior pillar, formed by the palato-glossius muscles, and the posterior pillar, formed by the palato-pharyngeus muscle. The function of these glands is not definitely known, some inclining to the belief that they have some secretory principal of use to the system, others that they are sentinels of defence against bacteria of various kinds. The latter view is supported by Goodale, who introduced carmine into more or less hypertrophied tonsils, and on later removing the gland, absorption of the carmine was found to have taken place. At any rate, enlarged cervical glands are frequently found co-existing with enlarged tonsils, and in many instances, disappear after removal of the tonsils.

Tonsils are normal structures, but when projectiong beyond the faucial pillars, may be said to be pathalogically enlarged. There are many cases of diseased faucial tonsils which cause very marked systemic disturbances, but which do not project beyond the pillars. They may, however, on becoming inflamed, project well out, and their contents, which is often a foul caseous material, can be seen appearing at the mouth of the crypts. Disease of the supra-tonsillar fossa, a cavity of varying size, situated at the top of the tonsil, and immediately behind the plica semilunaris, almost invariably accompanies this form of tonsilar disease.

There are various names given to enlarged tonsils, according to their consistence and internal appearance. Thus we may have the cowled tonsil, so called by Moure, in which the upper border of the upper part of the anterior faucial pillar, the front boundary of the supra-tonsillar fossa, forms a sort of cowl or covering for the enlarged gland, a small and hard tonsil is not infrequently seen in adults suffering from chronic pharyngitis. The honey-combed, or ragged tonsil, (Lennox Brown) contains cul-de-sacs, in which caseous or calcarious secretions are found. The overhanging tonsil is another variety, which differs from the ordinary prominent tonsil, in that there is a projection downward toward the laryngo-pharynx. There are also tonsils which project but little, and are enlarged in an antero-posterior direction presenting a comparatively flat surface internally.

*Read at the meeting of the Ontario Medical Association held in Toronto, June 1902.

I would divide hypertrophied tonsils into two distinct classes for operative treatment.

(1) Seventeen years and under.

(2) Over seventeen.

In the former and up to twenty or twenty-five years of age, I have but on one or two occasions, failed to find sufficient hypertrophy of the pharyngeal tonsil, (adenoids) to require removal. Adenoids may exist without enlarged tonsils, but up till puberty, or a few years beyond, enlarged tonsils are practically always associated with adenoids. I know this is not the opinion of all, but it has been my experience in my own practice, and I have seen it with hardly an exception, in the Central London Throat and Ear Hospital, where such cases are seen by the thousands.

The indications for removal of tonsils are, in my view, as follows:

(1) Cases of deafness with very large tonsils.

There are, in all probability, adenoids associated with the faucial hypertrophy, and these are removed also. Anatomically the tonsils alone cannot interfere with the ventilation of the Eustachian tube, but they may, by impairing the dilators of the tube interfere with its functions.

(2) Cases of enlarged tonsils in debilitated children or adults.

(3) Cases of frequent attacks of tonsillar or peritonsular inflammation.

(4) Cases of enlarged tonsils whose structure is filled with caseous material, which causes impaired nutrition and foul breath, as well as causing or keeping up a chronic pharyngitis or a secondary laryngitis.

(5) Cases of enlargment, sufficient to impede speech, respiration, or deglutition.

(6) Cases of small submerged tonsils, whose structure is often one suppurating mass, and associated with supra-tonsillar disease.

There are many healthy children, who have enlarged tonsils, that cause no symptoms whatever, and in the natural course of events, these would atrophy. If frequently seen these *may* be left alone, as Nature *may* look after them. We must, however be careful that a patient does not grow *into* symptoms, while growing *out* of his tonsils.

The anaesthetic is one that has caused a great deal of discussion.

In children, where practically adenoids always co-exist, Nitrous Oxide Gas, given in the upright posture, is the ideal anaesthetic. There are two essentials however, to good results with it,—

(1) Skilled Anaesthetist.

(2) Rapid and thorough operator.

Everything connected with the operation must be systematized, as no delay can occur, else the anaesthetic will not be sufficient. In very

young children, say under four years of age, N_2 O_2, is not well born. Chloroform is best used given sparingly, and not so that the laryngeal reflex is lost. In young adults and those of more mature years, if the guillotine, galvano-cautery or galvano-cautery snare, be used, cocaine twenty per cent. will do away with a great deal of the pain. In cases hereafter mentioned, in which the punch forceps and cold snare are used, I think gas, again, the ideal method, though with the snare only one tonsil will, as a rule, be removed by one administration. I have had no experience with Hydro-bromic ether. I unhesitatingly condemn the removal of enlarged faucial and pharyngeal tonsils, in young children, without anaesthesia.

Different Methods.

(1) *Guillotine.* This is by far the most universally used instrument. Its advantages are thoroughness and rapidity with which the operation can be performed. There are cases however not suitable for the use of the ring knife, viz.—

(1) Submerged tonsils, except when projecting during an acute attack of inflammation, when they may very properly be removed.

(2) Cases of enlarged tonsils in people above 17 years of age.

In cases where the tonsil is very large and spongy, one is probably safer not to use the guillotine. There are many kinds of guillotines, each bearing somebody's name. Generally speaking, that of McKenzie will be found to answer very well. Those accompanied by forks or prongs, to lift the tonsil before cutting, offer no advantages that I can see. If the Anæsthetist pushes the tonsil well towards the middle line, and the operator presses his instrument well externally, practically all of the gland will be removed. Stewart Low has recently devised a handle for a tonsillotome by which the handle is prolonged into a hook permitting the uluar side of the hand to secure more leverang in pressing the blade outward. Complete removal of the gland, while anatomically possible, is very rarely performed.

It is very poor surgery to remove a small piece of the tonsil, expecting the remainder to shrink away. Haemmorrhage is more to be feared from removing too little than to much. A tonsillitome having an opening into which the gland closely fits, gives better results than one too large, when the pillars may be wounded. Those cases, in which the tonsil projects downwards into the laryngopharnyx, require a special application of the guillotine. If one presses the instrument, as in the ordinary way, he will amputate only the upper part of the gland, while if the tonsillitome be placed upside down, and well to the base of the tongue, it can be made to encircle the tonsil from below, and then gradually

turning the instrument on its side, it will be made to fit well up to base of the gland. Frequently in cases when the anterior and posterior pillars are adherent to the gland, separation of these structures allows the gland to come out as it were, and be more readily and completely removed.

(2) *The Cold Snare.* In this instrument we have a very safe and thorough method of removal The wire must be No. 8 at least, and the instrument such that the tonsil is crushed rather than cut. There are snares being sold here that actually cut like a knife, both by the wire and the end of the snare. I have had two cases of severe and alarming haemmorrhage with this instrument. We use the snare in those cases where we fear haemmorrhage, (*i. e.*) over 17 years of age. Sometimes the snare will not remove sufficient, and Bosworth advises the use of the snare again, trimming as it were the field of operation. In my own practice, I prefer the Dundas Grant Tonsil Punch, which is more rapid and quite as safe, for subsequent trimming. Of course the snare is only of use when the gland projects well out between the pillars, and they are not adherent to it.

I have had no experience with the hot snare, and cannot see the advantage of it. It leaves a very sore throat, and frequently severely burns the faucial pillars. In using it, care must be taken to increase the current while going through the gland, as the wire rapidly turns cold.

(3) *The Punch.* Here the tonsil is practically crushed off. There is no fear of hæmmorrhage. A number of applications can be rapidly made, and practically all the gland eneucleated. It is the only instrument of any use in these cases of diseased though not enlarged (submerged) tonsils. That desgined by Dundas Grant has the advantage of being used for both sides without reversing. In the hard small tonsils of adults, it is of particular use, as well as in those long flat tonsils, where it is almost impossible to get sufficient in a Guillotine. Recently cases have been recorded, in which tonsils in this description are eneucleated almost entirely. The gland must be pulled out, and with scissors or small forceps, the external surface of the gland is reached, and the tissue removed piecemeal.

(4) *The Galvano Cautery Puncture.* This is a very tedious method of removal. It requires a number of sittings, and is very frequently followed by severe peritonsillar inflammation. It is said to be absolutely void of all danger of hæmmorrhage. Dr. Wishart has mentioned cases to me in which very severe and alarming hæmmorrhages followed slight cauterization. There are some patients who absoluteley refuse anything like a cutting operation on the throat, and it is in these cases and in these alone, that I would adopt this method of procedure.

Complications at the time of or following the operation :— (1) *Hæmmorrhage.* Considering the frequency with which the operation is done, especially with the Guillotine, death from hæmmorrhage is very infrequent, while severe and alarming bleeding is far more common. Age exerts a very marked influence on hæmmorrhage. Those over seventeen years are much more liable to have excessive bleeding, than those of younger years. Still it has probably occurred to most of you to occasionally find severe loss of blood in operations on young children. This may be due to the size of the gland, with an abnormal blood supply, or to a tendency of bleeding, inherent in the individual, such as in hæmophilics. In the former, the means to arrest the hæmmorrhage are by styptics, such as adrenaline, tinct. ferri. perchlor ; a paste made according to Grunwald by rubbing gallic and tannic acid into a small ball and applying this to the bleeding point; pressure by the fingers, one inside the mouth and one outside. Instruments for this purpose are of little practical use, and are far inferior to digital pressure. MacIntyre, in one instance, succeeded in stopping the flow, only by suturing the anterior and posterior pillars, thus covering the tonsil space almost completely. If the hæmmorrhage be due to cutting a very large vessel, pressure forceps properly applied and left on, may suffice, or it may even be necessary to tie the carotid artery. The blood supply is from the dorsalis linguae from the lingual, the ascending palatine and tonsillar from the facial, the ascending pharyngeal from the external carotid,the descending branch of the internal maxillary, and a twig from the meningeal. In cases where it is necessary to adopt the latter method, the bleeding is so severe, that the patient will bleed to death before the vessels are controlled. A speciman found by Dr. Wishart in which the artery projects well internally, would, if severed in any way whatever, cause the patient's death before anything could be done. Care must be taken that the patient does not swallow the blood, and thereby lead to a sense of false security, or that some blood reaches the larynx, causing suffocation.

Bleeding, however, may not come on at the time of operation, but follow even as late as two weeks. Avoidance of all exertion, and any food tending to tear, such as crusts of toast, etc., should be insisted upon, moreover the greyish eschar, formed a few days following the amputation of the gland, should be left to come away itself. Attempts to remove it may excite a severe haemmorrhage. In using too large tonsillitomes, one may wound the faucial pillars, and cause a very annoying haemmorrhage, requiring pressure forceps or cauterizing to control it. One must not mistake this for a tonsilar haemmorrhage. Careful inspection must therefore always be made to see the bleeding point. An instance occurred in my practice recently, in which I removed with a cold

snare, both tonsils, which were very large, from a woman 69 years of age. Five days after the operation, her mouth suddenly filled with blood and I was sent for hurriedly. No bleeding point was to be seen, on looking into the mouth, but with a laryngoscopic mirror, a lingual varix, of which she had plenty, was seen to be covered by a recent clot. The bowels were freely opened and latter the galvano-cautery applied to the enlarged veins, and no further trouble ensued. If any one here has never had trouble with bleeding, following tonsillitomy he will some day remove an apparently insignificant tonsil, the immediate result being such, that all his energies will be taxed to keep the patient from bleeding to death. Daly, quoted by Lennox Browne aptly says "He who has never had a haemmorrhage has yet to meet his Sedan."

In haemophilics all the above means should be adopted, but all will probably fail. The best way is the most rational, *i. e.* by enquiring into family history and refusing operation.

Medicinal treatment is usually not required, following this operation, though for nervous patients Pot. Brom. may be given with advantage, and in all a gragle of Pot. Permang will be found grateful. Small pieces of ice kept in the mouth are of service as is also plenty of ice cream.

Specimen Cases of Tonsillar Disease.

Three cases of tonsillar disease in my practice, have been of particular interest to me, so I will give you very brief notes on them.

1. A. B. Bank Clerk, age 36, complained of hoarseness of varying intensity, of three months duration. He suffered frequently from sore throat, and had lost twenty pounds in weight within three months. The tongue was very much coated, breath foul, pulse and temperature slightly above normal. The oro-pharnyx was markedly congested, the faucial tonsils were slightly enlarged, while the crypts were blocked with caseous material of a very foul odor. A probe passed upward into the supra-tonsillar space showed it to contain a foul greenish yellow mass. The larnyx showed general congestion of the mucous membrane, some thickening on the vocal cords and a deposit of muco-pus in the inter arytenoid space. With Grant's Tonsil Punch, I removed the suppurating mass between the faucial pillars, and with a sharp curette thoroughly cleaned the supra-tonsillar space. An antiseptic gargle was used, and within six weeks, the laryngitis was well, and the patient had regained his weight. This is really an instance of auto-intoxication.

2. A. H. Girl. Age 14. Very large tonsils and adenoids. On amputating the left tonsil, a gush of pus came out. The cut surface of the tonsil was hollowed out to contain pus. The other tonsil on being cut into, after removal, showed a small quantity of pus. The pus in

both instances was very foul, and gave no indications whatever of its presence. I took the case to be one of chronic abscess of the tonsil.

3. H. A. Age 10. Boy. For years had been bothered with Eneuresis, that nothing seemed to stop. I was not aware of this until his father informed me of the cure some weeks later. His throat was filled with enlarged tonsils and adenoids, which I removed. The result was a complete and permanent cure to the Eneuresis. The adenoids may alone have been the cause, but I cannot determine this point.

In conclusion I may mention that I have endeavored to confine my remarks to the ordinary cases of enlarged tonsils, as seen by all of you very frequently, and I have therefore omitted mentioning cases of enlarged tonsils, of a specific, tubercular or malignant nature.

I append a letter I received from my friend and teacher Mr. Lennox Browne to whom I wrote for his views on some points connected with the operative treatment. The letter was unfortunately not received until after my paper was read at the Association Meeting.

"My view on the treatment of hypertrophy of the faucial tonsils are, I think, clearly set forth in the fifty edition of my systematic work, "The Throat and Nose and their Diseases," published in 1899.

"But I have pleasure in definitely answering your several questions.

"1. *Tonsil Guillotine.* The tonsillotome I employ is a modification by Liston of that known as Physick's but in the present day incorrectly named Mackenzie's. This modification consists in the blades of the cutting knife being two-edged to an angle instead of semi-circular. The point of the two-bladed knife seems to better catch the tonsils as it is projected through the ring and prevents any chance of the blade slipping over as it is sometimes apt to do when the tonsil being large and flat is not strangulated as it were by the ring; and by the way it is always better to have a tonsillotome with the ring rather under the size as the gland is in that case better forced through the opening and a fuller amount removed. For it may be stated as an axiom, that in tonsillotomy, the operation may fail through not removing enough but never from removing too much.

"2. *The Cold Snare.* I think you have seen the cold snare employed at the hospital; it is excellent for very large tonsils where hæmorrhage is likely to occur, and is even worthy of more frequent general adoption especially in advanced adults in whom the coats of the vessels are less elastic. The wire should be thick so as to crunch and not so thin as to clean cut. The only drawback is that it is not easy to employ the instrument under nitrous Oxide Gas or other forms of anæsthesia; but although the operation with it is rather long, lasting some thirty seconds, it is not really painful to the average patient if cocaine

has been employed; and again by the way, in all cutting operations when I use cocaine, I dissolve that drug in a tincture of Witch Hazel which lessens the possibility of secondary hæmorrhage on reaction from the cocainization.

"3. *Heated Snare.* I never employ the heated snare for enlarged tonsils. It is more painful than the guillotine at the time, more painful afterwards, and possesses no advantage whatever over other methods. I do not suppose you ever saw it employed at our hospital.

"Under this head I include (5) galvano-cautery, for I confess to having hardly heard of the thermal cautery being employed much less recommended.

"4. *Punch Forceps.* The punch forceps are useful for small tonsils, especially when these are the subject of chronic lacunar inflammation or of leptothrix. In the latter case I always make an after application of Lactic Acid, 60 per cent.

"6. *Tonsil Slitting.* I rarely find this necessary, but little encysted (cold) abscesses of the tonsil, occasionally to be seen, should be freely laid open and touched with chronic acid, or lactic acid, on the end of a cotton wool probe after scraping. My tonsil knife with the limited cutting edge of an inch at one end and sharp spoon at the other is a useful instrument for this purpose.

"I have said nothing as to profuse or secondary hæmorrhage after tonsillotomy. It has been very rare in my hands, but should it occur I would recommend a course suggested to me by Dr. Macintyre (of Glasgow) and described in my book, viz., to pass a needle with a long whip-cord ligature through the anterior faucial pillar, the stump of the tonsil, and the posterior pillar, the two ends are then to be tied and cut off short.

"Regarding this point of hæmorrhage I think a frequent cause thereof is the wounding of the pillars, which very liable when a scalpel is used, and is effectually guarded against if the hint as to the size of the guillotine ring in proportion to that of the tonsil is observed, and on this ground alone the advantage of the tonsil guillotine over the old tonsil knife is emphatically demonstrated.

"For the same reason of inflicting wounds leading to hæmorrhage I deprecate the employment of forks sometimes to be seen in the lists of French manufacturers but I hope now-a-days only in museums of antiquities."

Mansfield Street, London W., May, 1902.

Since writing this letter, Mr. Lennox Browne has died, and laryngology has lost one of its most brilliant workers.

SOME NOTES ON EXAMINATIONS FOR LIFE ASSURANCE.*

By JOHN L. DAVISON, B.A., M.D., C.M., M.R.C.S. Eng.
Professor of Clinical Medicine, Trinity Medical College; Medical Referee of the Imperial Life, Toronto.

OUR worthy President asked me to make a few informal remarks on the examination of applicants for life assurance; thinking my experience during the past five years may enable me to say a few words that will be helpful to the profession in their daily work as life assurance examiners.

The importance of examinations for life assurance to the profession will be apparent to you when I tell you, that in Canada in 1901, no less a sum than $170,000 was paid as medical fees for examinations, while in the United States the sum was over three and a half millions. Again, let me state that so great a hold has the principle of small and steady savings, as expressed in life assurance, taken upon the public that many medical colleges in the United States have seen the necessity of adding to their curriculum a course on medical examinations for life assurance. I have no doubt the same will before long obtain in Canada, and then our young men will go out better prepared to work this department of the field of labor.

I spoke a moment ago of the importance of this field of labor from a financial standpoint. We medical directors at the head office know that there is often delay and some worry connected with the work, but the pay is certain, the issue of life and death is left out, and for various other reasons, the work is not so harassing or arduous as ordinary medical practice.

The importance of careful work is even greater in another direction; I mean the protection of the companies and, through them eventually, of the public. May I make this assertion? I believe that if every examination was conducted in the best and most scientific manner possible, with the status of medical science as it to-day is, and the full information placed in the hands of the head office, life assurance would be about one-third cheaper than it now is.

Competition in life assurance, as in all other walks of life, except in the practice of medicine, is now so keen that rates are at the very lowest possible figure, while the cost of obtaining business has greatly increased within the past two or three decades. So that the business done now does not make anything like the same showing in profits to the shareholders or policyholders that it did twenty-five years ago.

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* Read before the Ontario Medical Association, June 4th, 1902.

The perfunctory manner in which examinations are sometimes made does not reflect credit upon the profession. Instances frequently crop up of absolute carelessness on the part of examiners. Happily, I may say that the great bulk of examiners recognize their moral responsibility, and do their best to place the necessary information before the company. I have myself been examined for assurance more than once in such a way as to assure me that the officer could not have detected even a gross and very evident lesion of the heart, lungs, or kidneys.

Let me take up now a few of what seem the most startling and easily avoidable errors.

Examination through the clothing: this cannot be done. With the definite technique of modern physical examination the heart and lungs cannot be examined properly except next the skin. Even the thinnest and most tightly fitting under-vest interferes to some extent with proper examination. Would any one of you, supposing you feared a lesion in your own heart or lungs, think that your doctor had done his whole duty if he had not examined you carefully next the skin. What would be your opinion of his honesty, or scientific knowledge, or trustworthiness, if, as I have seen done in examinations for life assurance, he had put a stethoscope, or his ear outside an overcoat, or outside a vest, or outside a starched shirt. Why, then, should the examiner be so careless when a contract involving, it may be, tens of thousands of dollars depends upon his report of the applicant's heart or lungs?

The most dangerous heart murmur is not always the loudest; indeed, I think the reverse is the rule. The loudest wheezing or sonorous rale of a bronchitis or asthma is innocuous compared with the earlier manifestations of pulmonary tuberculosis; the one might be heard through a coat or vest, the other assuredly could not.

Then, again, the naked torso often reveals many signs of great importance in regard to the question of long life. The general appearance of premature old age, as shown by the condition of the skin and tissues, the visable pulsations of the brachial, axilliary, or subclavian arteries, suggestive of arterio-sclerosis, the most deadly of pathological changes in the blood vessels, the *caput medusæ* strongly significant of liver trouble, the enlarged abdominal veins, the diffuse, displaced or heaving or flapping impulse of the heart, the presence of herniæ of various kinds, the scaphoid unsymmetrical chest, imperfect expansion, alar scapulæ, *et al, ad infinitum, et ad nauseam*, give valuable evidence of an impaired constitution, or of a likely early death

You may say all this is unnecessary to speak of, and you may absolutely believe what you say, but I know that many examinations

are made in such a way that none of the things I have mentioned would be discovered, and, therefore, would not be reported to the medical referee at the head office.

A case in point: Mr. A. B. was reported to me as an A. 1 risk. The report was passed on, but fortunately the policy was not issued before I was aked to examine the man for further insurance. What did I find? First, double inguinal hernia, none reported; second, marked degeneration of the blood vessels as shown by visible, tortuous, pulsating, hardened and thickened arteries in different parts of all four limbs. Third, a liver in the first stage of cirrhosis, enlarged, tender, etc. Fourth, enlarged abdominal veins, plainly marked. Fifth, a hypertrophied left ventricle, with accentuated aortic second sound. This was very natural after the findings in the blood vessels. Now, that examiner had not seen any of the above signs, and why? because he had not looked for them, had not stripped the applicant, had not, in fact, examined him, but had merely written answers to the questions proposed, and by reason of his great carelessness had answered the most important of them absolutely incorrectly.

As to this stripping, the patient may say "Oh, bother," or may demur more strongly and may insist that Dr. Blank did not strip him when he was examined for Blank Company, but if you show him the necessity for doing as you ask he will assuredly respect you more than he would had you made a slip-shod, or prefunctory, and superficial examination. If he sees that you, who are the custodian of the company's interests, deal loosely with that company, how will he expect you to deal with him in a case of illness

Remember, also, that your position is exactly the reverse in examining for assurance to what it is in your ordinary daily practice. A patient does not often minimise either personal or family weaknesses, if he come of his own accord to consult you and hopes to obtain relief. But, what memories the applicants for life insurance have! The marvellous lapses of memory shown by them should be given no milder name than lying. If they want a policy many applicants will take hurdles just as fast as you put them at them. Have any of you ever known an applicant to answer that he was a hard drinker? I have not, but I have rejected many cases for known alcoholic intemperance. Twenty or thirty drinks a day dwindle down to "an occasional drink." Attacks of pleurisy or pneumonia are given as "colds," Childbirth, over-work, broken heart, female disease, malaria, *et al*, take the place of tuberculosis. Previous rejections are forgotten, and "No" promptly answered to the question, the applicant not knowing that for mutual protection and for the prevention of fraud in this regard the main in-

surance companies of the world have a system by which a rejection is registered and information regarding such rejection is at the disposal of all other companies. These few instances will show you the mental attitude of the applicant, and you should be on your guard to meet and ferret out all equivocal answers and give the company the fullest information possible.

The use of alcoholic stimulants : May I give a word of warning in regard to the use of alcohol. Fortunately the drink habit, especially in this country, is gradually growing less, but withal, the number of deaths annually attributable to alcohol is greater than any statistics can show, as is well known to all physicians. Directly, or indirectly, it is doubtless responsible for nearly as many deaths as that scourge, "The White Plague"—tuberculosis. So that the duty of the examiner is to probe carefully to find if there be any dead bone in this direction. It may not always be politic, or even desirable, to put all you know upon the open report, but the head office should know all you know, regarding the habits of each applicant for life assurance. This subject could be enlarged upon indefinitely ; suffice it to say that if there be one subject upon which the head office wishes to be correctly informed it is upon this one.

Just one or two points : state the average amount taken. Answers may be " very seldom," " occasionally," " now and then," " when he feels like it," " no habit," " not for three months," etc. These are vague and unsatisfactory answers. A social drunkard may meet twenty friends a day : he may feel like it every two or three hours or less. " Not for three months " may mean the interval between sprees. " No habit " may mean that he doesn't go to bed on his hands and knees four times a week, etc.

The worst form of drunkard is the " lone " drunkard, or " sneak " drunkard, so well described by Kipling in his " Plain Tales from the Hills "; who, unsuspected for years by anyone except, perhaps, his wife, as Green says, takes a bottle into his room and drinks himself into insensibility. Then, there is the man who drinks on an empty stomach ; this is deadly. No need to speak to a body of men such as are before me on the baneful influence of such stimulation upon the gastric mucosa, liver, heart and blood vessels.

The Gold Cure : Insurance companies look with great suspicion upon reformed drunkards. Time and family history would be factors in determining what form of policy, if any, could be issued. If there was any taint of alcoholism in the family, rejection would be certain.

Beer and spirits: There is not much difference as to the deleterious effect of beer and spirits, provided the quantity taken be excessive; each producing its own evils in its own particular way. I would say that in this country, considering climate, race, temperament, the strenuous life, etc., the man who stimulates regularly two or three times a day is an impaired life. He would be better with much less, and in the overwhelming majority of cases with none at all. To sum up in a word: indulgence in alcohol tends to shorten life.

Arterial sclerosis, appoplexy, paralysis and chronic Brights. The whole period might be profitably spent in the discussion of any one of these, but as they are first or second cousins we may group them. I mentioned the quartet to call your attention to the question of heredity in regard to them. It is accepted as a principle that the conditions which lead to arterial sclerosis may be transmitted, and the evidence of it runs in families as long life runs in certain families, or as paralysis, appoplexies, heart failures, and aneurysms run in other familes. Huchard speaks of hereditary aortism. Aside from accidents, life is usually terminated by this slow process of arterial sclerosis (Whittaker), so that the group must be looked upon from a life assurance standpoint as having a strong element of heredity, and therefore the family history in this direction is of great importance. So careful search should be made as to the appearance of diseases due to arterial degeneration in the forbears of the applicant. The old saying of Oliver Wendell Holmes that we should be very careful in the selection of our ancestors is worthy of being placed among the notable sayings of the world. Osler's happy expression "Vital Rubber," as applied to the amount and quality of elastic tissue one has in his arteries, will, I think, live forever.

Let me note that the question has been argued as to whether chronic Bright's, that *bête noir* of life insurance companies, is not primarily a disease of the arteries.

I have but glanced at these questions in order to show how the head office is obliged to look upon the question of heredity, a word of awful meaning to millions. Maudsley has put it well. He says, "There is a destiny made for a man by his ancestors, and no one can elude, were he able to attempt it, the tyranny of his organization." In a history of prostitution to which I have had access, a most interesting work I may say, I found the following:—Frau Jurke was a chronic drunkard, born in 1740, died in 1800. She had 834 descendants, of whom 709 were traced. Of the 709, 106 were illegitimate, 142 beggars, 64 were charges to the State, 181 females were prostitutes, 69 were committed for crime, and in all the descendants of this one drunkard cost the state in a

period of 75 years the sum of $1,250,000. "It had been better that a millstone, etc." Can a man escape from being born to have black hair, or to be six feet high, or to have an ear for music, while his neighbor has blonde hair, is five feet six and has an ear which is as leather, so far as the procession of musical sound is concerned? How much more, then, can he escape the inheritance of lack of vital rubber in his arteries, psychical stigmata, such as a tendency to alcoholic excess, insanity, chorea or criminal impulse.

So, we have the question of family age coming in. The applicant may be well-nourished, rosy, happy looking and to the unskilled eye of the agent a most excellent risk, but the earmarks of early death are upon him, the visible temporal or radial arteries showing sclerotic changes, in the puffy under lower lid, in the overfull capillaries, in the high-tension pulse, in the hypertrophied left ventricle with its accentuated second aortic sound, while the urinary examination shows low specific gravity, large quantity with or without small amount of albumen or casts. The man was born to this probably, or he may have to a great extent acquired it.

I mentioned the agent a moment ago. A most valuable man in life assurance is the worker in the field, but he is human. He is not a physician and cannot see inherent marks of weakness and short life, cannot appreciate the meaning of such matters as we have just been considering, and, above all, he wants his client to pass.

May I say here that the most disagreeable part of a medical director's duties at the head office is the eternal warfare which he must wage with certain agents for new appointments. At least, it is so to me. It is a pleasure and a relief to initial a death claim compared to getting into a discussion with an agent on multiple appointments, etc. Let me say, also, that I believe all companies support the medical officers to the utmost. I know ours does, and discourages multiple appointments even at a loss of immediate business.

There are very many other points which I would like to discuss but time forces me to close. Just one or two remarks in brief:

(1) Write private letters to the medical director at the home office, giving any information which will be of service. Such letters are greatly appreciated and are held strictly confidential. You may not wish to put everything you know upon the open report; indeed, it would often be impolitic and undesirable to do so, but the General Post Office is always at your service. Do it at once so that the policy may not be issued before your information is available.

(2) Do not rate an applicant first-class if he has a bad family history. I have spoken of heredity largely to this end. When rating the applicants second or third give reasons, even such reasons as general appearance of weakness, or want of endurance will be of service in aiding the head office to determine what form of policy may be issued. It prejudices the head office against the applicant if the medical officer rates him first, when family history, under-weight, habits, or any other reason show him to be really a second or third class life.

(3) Be careful to give details of previous illness. For example, A. B. was reported to me as ill six months ago. No details were given. Correspondence ensued, and it was found that A. B. had suffered from appendicitis six months ago and no operation. This want of care in giving details of necessary information brings about correspondence, which is irksome both to head office, though they have typewriters at hand, and to the medical officer, who must see that he has been careless in his report.

(4) Tuberculosis: The pendulum of popular and professional opinion has swung too far out on the side of infection in tuberculosis. Heredity is an important, a very impotant factor in this disease. State very carefully family history, as showing heredity. As to infection, state when the relative had the disease, whether the applicant lived in the same house, whether he or she was exposed by constant attention upon or contact with the sufferer. In case a husband or wife, when they began to occupy separate rooms, and all points which will enable the medical director at the head office to decide as to the danger from infection in any given case.

(5) Syphilis: Life Assurance Companies invariably reject syphilitics. My own impression is that they are never safe lives. Even with the most careful treatment, the disease is liable to show itself in after years.

(6) A work recently published by P. Blakiston & Co., by Charles Lyman Greene, of St. Paul, on the Medical Examinations for Life Assurance, is invaluable to any man who makes even one examination a year.

SIR FREDERICK BORDEN HONORED.

THE council of the College of Physicians and Surgeons of Ontario has conferred the College License, *honoris causa*, upon Sir Frederick Borden, M.D., Minister of Militia for Canada.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

BACKACHE IN WOMEN.

IN the "*Medical Times and Hospital Gazette*," November 15th, Bedford Fenwick states that there are four principal causes for this very common condition in women, viz. :

(1). Displacement of the uterus, most commonly retroflexion, and especially if this be associated with enlargement of the organ, either from sub-involution or from the presence of a new growth, and that the direct cause of the pain is due to the dragging on the uterine ligaments, which, in cases of prolapsus of an enlarged organ, must be more or less considerable. The utero-sacral bands extend from the bodies of the second and third sacral vertebræ, and thus the constant dragging causes this pain. The treatment is replacing the uterus and keeping it in its normal position. This the writer does with success in many cases by the use of the Hodge or Zwanske pessary.

(2). Pressure on the sacral nerves, due very frequently to constipation. For this the treatment has been very frequently outlined. Fenwick proposes the following :

Ferri Phosph .....gr. 2
Extr. Belladonn .....gr. ¼
Extr. Nux Vom .....gr. ¼
Extr. Cascar. Sagrad .....gr. 2
M. pro pil. i ; ter die post cib. sumend.

(3). Muscular atony. The pain is felt in the lumbar and dorsal regions ; generally found in anæmic persons of sedentary habits. The treatment is the ordinary systematic routine, with gymnastics, massage and electricity for the local condition.

(4). Affection of the cervix uteri, especially its dilatation by some new growth, the pains bearing an analogy to those of the first stage of labor. The treatment is surgical.

THE HEART IN PNEUMONIA.

IN the *Post Graduate*, November, Wainwright calls attention to some of the effects of pneumonia on the heart. It is the right side that is of importance, the changes being analagous to those found in the left side in other conditions. At autopsy the right cavity of the heart is found dilated and in it a firm clot, usually organized. In no other

disease is this found. The right heart has to contend with a congested area, de-oxygenized blood, solidified lung tissue and emphysema. Defective conditions of the right side predispose to pneumonia. In dilatation the backward pressure leads to stasis and suppression of secretions in the portal area, and we get diagnosis of typhoid, etc. The accentuated pulmonic second sound is the guide for the administration of stimulants, it is a confession of failure of the heart, and the call for aid. Do not wait for a feeble first sound and rapid weak pulse, or it may be too late. Combine heart stimulants with vaso-dilators, digitales, strychnia and alcohol with mercury, the nitrites, belladonna, etc.

BACTERIOLOGY OF THE BLOOD.

IN the Australasian *Medical Gazette*, for October 20th, Dr. Stacey, Pathologist of the Sydney Hospital, reports the results of the examination of a number of cases to determine the bacteria present in the blood in various forms of infection. He summarizes his results as follows;

PNEUMONIA.—Of 17 cases examined pneumococci were found in seven, and in three only of these before death. In the other four the blood was not examined during life; possibly, if it had been, the organisms would have been found. Of the three cases in which it was found during life, six hours was the longest period before death ensued. Its presence is thus inconsistent with very many hours of life. The blood was examined in several very bad cases which eventually recovered, no organisms being found, so that their presence or absence is of some prognostic value; but, all the same, a great many cases of pneumonia die without becoming septicæmic. In one fatal case recorded in the table pneumococci were present in the blood and in the pus of the sphenoidal sinus, but there was no evidence of pneumonia.

ACUTE INFECTIVE PERIOSTITIS AND OSTEOMYELITIS.—In the three cases recorded, staphylococcus aureus was present in pure culture in the blood and in the pus of all the abscesses. In one case it was not present very early in the illness, but appeared later. This patient lived about five weeks; the other two died within a week.

CELLULITIS.—Of this, six cases were examined and organisms found in every case. In three, the staphylococcus aureus; in one, streptococcus; in one, staphylococcus albus (? streptococcus; see introductory remarks); and in the other one, the staphylococcus aureus during life, but when examined after death streptococcus and staphylococcus albus. All were fatal, the staphylococcus aureus killing quite as rapidly as the streptococcus.

DIPHTHERIA.—In the fatal case examined there was a mixed infection of the throat, viz:—Klebs-Loeffler and staphylococcus, but the blood was devoid of organisms.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.—Only one case examined; no organisms were present.

ENTERIC FEVER.—Two cases examined and in both typhoid bacilli were present. In one case the patient died, seven days after they were found, of septic peritonitis following perforation. The other case (at time of writing, 22 days after) is still alive and thought to be recovering; so that their presence in the blood does not necessarily mean a fatal issue.

PUERPERAL SEPTICÆMIA.—Of the three cases recorded only one was purely septicæmic, the other two developing abscesses in other parts of the body, thus being pyæmic as well. In one the streptococcus was found. In the other two, staphylococcus albus (? streptococcus; see introductory notes). The patients lived on an average several weeks after becoming infected; they invariably become intensely anæmic.

PYÆMIA.—Two cases recorded, one following upon lateral sinus suppration, and the other puerperal. The blood was sterile in each case; it must at one time earlier in the illness have contained organisms, as shown by the presence of abscesses scattered throughout the body.

PLAGUE.—No specific cases mentioned in the table, but a dozen or more patients were examined, plague bacilli being found in several; these (as is always the case) proved fatal. Many cases, die, however, without becoming septicæmic.

TREATMENT OF RENAL LITHIASIS.

IN the "*Bulletin Général de Thérapeutigue*" Oct. 30th, this subject is treated by Robin under three headings.

(1) Treatment of nephritic colic.

(2) Treatment of renal lithiasis properly so-called.

(3) Treatment of the diathesis.

(1) For the first, the indication is first to calm the pain, and in order that the sufferer may have a mixture on hand for this purpose the following is prescribed:

Bromide of Potassum	6 gr.
Cherry laurel water	10 m.
Syrup of Etier	20 m.
Chlorhydrate of Morphine	1-20 gr.
Hydrolat of Valerian	120 m.

To assist expulsion diuretics are given, the vegetable diuretics being chosen.

(2) Treatment of the lithiasis.

The waters of various springs are to be drunk either at these places or at home. The writer discusses the virtues of various sources, and warns against such as by their power of rendering the urine alkaline, tend to cause deposits of phosphates which enlarge the calculi.

The indications are :—

(a) The water should be well tolerated by the stomach and cause no malaise.

(b) The patient should void in the urine, within two hours, the greater part of the water ingested.

(c) It should induce the secretion and excretion of well marked red uric acid precipitate.

(d) It should induce free motions at least twice a day.

(e) The patient should drink no other water and avoid coarse or acid foods or fruits.

(3) In the treatment of the diathesis, regimen, hygiene and medicament are to be considered. The regimen should contain two parts of vegetable food for one of meat or eggs ; red meats, veal or lamb, alcohol, sweets and pastries are outlawed.

Exercise must be regular, suitable and enjoyable. As medicament piperazaine and its derivatives sidonal, globularine, etc., are advised.

THE MIMICRY OF PREGNANCY BY TUMORS.

IN *American Gynecology*, November, Dr. Howard Kelly points out that the following elements enter into the cases as misleading diagnosis:

(1) The patient may be very fat, making it most difficult to palpate and percuss an abdominal enlargement with precision.

(2) The vagina may present a more or less characteristic violet discoloration.

(3) The cervix may be soft.

(4) The breasts may be enlarged, painful and may contain fluid.

(5) There may be a cessation of menstruation with more or less nausea.

(6) The linea nigra may be well defined.

(7) There may be a regular enlargement of the abdomen more or less closely corresponding to the calculated period of pregnancy.

(8) The mass may closely resemble a foetus in the abdomen presenting a head, body and limbs.

(9) The subjective sensations of pregnancy may be a prominent, and to the patient a factor decisive beyond argument, as to the existence of a pregnancy.

(10) A perfect abdominal ballottement may be present.

A diagnosis can always be made by a thorough examination which pays close attention to all the important signs of pregnancy.

First and foremost is the fact that the heart sound is always absent, and the pulsations in the tumor will not be mistaken for a foetus if the observer is careful to notice that they are synchronous with the radial pulse. This sign alone is decisive.

In the second place, even taking the list of mimicking signs given above, no one case presents them all and the omission of one or other of the usual important signs should put the observer at once on his guard. For example, it is a most suspicious fact when the menstruation has continued through the supposed pregnancy, and I find that physicians treat this sign too lightly, telling the patient that they know of a number of instances in which menstruation has continued. This contradicts my experience.

Again the presumption is strong against pregnancy when there is an unaltered hard cervix and the burden of proof rests heavily on him who assumes the contrary.

A more careful examination for ascites, as distinguished from fluid in utero, will reveal it in most cases if the area of dulness are marked out in four postures, erect, lying dorsally, and on right and left sides.

A recto-abdominal bimanual examination under a brief anesthesia of gas will always clear up the diagnosis and reveal the uterine tumors or the small uterine body with ovarian tumors.

Lastly, a better knowledge of abdominal palpation in advanced pregnancy will almost always avoid error in diagnosis.

Other factors which often help in the diagnosis of these mimicking cases are the age of the patient and the length of time the tumor is known to have existed.

The absence of the regular enlargement of the womb, or the non-occurrence of labor, running weeks or months over the calculated time.

The existence in a single woman of an intact hymen.

In all instances of error which have come under my notice the mistake would not have occurred if a thorough examination had been made, using an anesthetic if necessary, and paying attention to all the signs of pregnancy.

ANEURISM OF THE AORTA

DR. OSLER says in the *Maryland Medical Journal*, December: Aneurism of the aorta may be grouped into those that give signs and those that give symptoms. An aneurism of the intra-

pericardial portion of the aorta may give neither signs nor symptoms. An aneurism of the transverse arch usually gives both, as it is readily understood when one recalls the confined space between the manubrium and the spine. Aneurism of the terminal portion of the arch or the thoracic aorta usually gives symptoms, but no signs.

TYPHOID FEVER AND DRINKING WATER.

AS a result of investigations outlined in the *New York Medical Journal* November 29th, Leckert summarizes as follows:

(1) All rivers, creeks, brooks and lakes located in populated districts of the United States and Germany have long since become permanently infected with the typhoid bacillus.

(2) The chief carrier of typhoid germs into the human system is the drinking water of cities and towns.

(3) All cities and towns which are compelled to take their drinking water from lakes, rivers and brooks are in duty bound to clean the same by central sand filtration at the water-works.

ORTHOFORM IN THE DIAGNOSIS OF GASTRIC ULCER.

IN the *New York Medical Journal* November 29th, 1902, Murdoch states that orthoform offers a means of diagnosis of gastric ulcer from the fact that it relieves the pain due to this condition, but as it, acts only by coming in contact with a surface from which the mucous membrane is removed it does not relieve in ordinary indigestions; and so differentiates conditions whose symptoms are very similar in some cases. It may be given in eight grain doses in cachet and is practically non-toxic. while the fact that it is but slowly absorbed makes it more effective.

ICE FOLLOWING ABDOMINAL SECTION.

IN the November number of the *American Journal of Obstetrics*, Simpson advocates the use of ice applied to the abdomen to control peritonitis following abdominal section. The success following the application in cases with the typhoid signs of a well-developed general peritonitis, viz., pain, elevation of temperature, vomiting, distention, tenderness and suspension of peristatsis led the writer to use it as prophylactic measure in cases in which this complication was feared with gratifying results. A layer of ice, four inches thick, covering the abdomen from the ensiform to the pubis, was kept in position—separated from the skin by a thin gauze dressing—in some cases for four or five days.

Experiments on dogs proved that the application of ice to the abdomen was effective in lowering the temperature even deep in the pelvis as

much as four degrees centigrade; proving it possible by this means to produce at the seat of inflammation a degree of temperature which greatly retards the growth of pathogenic bacteria, and which contracts the blood and lymph channels, thus relieving the congested vessels and checking the serous weeping into the cavity, and that too without effect on the general temperature or detriment to life or tissue.

PERITONEAL TUBERCULOSIS.

IN the November number of the *American Journal of Obstetrics* Hall cites a number of cases in which peritoneal tuberculosis acquired a special interest from the similiarity of the symptoms of those of other troubles. In on case the patient, October 27, had suffered five attacks of appendicitis—so-called—in three years, each varying in length from ten days to three weeks, and leaving a thickened mass in the right iliac region which slowly disappeared. Operation revealed most extensive ravages of tuberculosis. The mass is due to agglutination of the intestines.

Other cases resemble tubo-ovarian disease or fibroids of the uterus and the diagnosis may be very difficult without operation, or again, encysted dropsy may simulate ovarian cyst. The differential diagnosis may be aided by keeping a three-hour temperature chart for a time when the destructive afternoon rise will suggest tubercular trouble, but operation, happily is indicated for either condition and at once clears up the diagnosis. The writer advises the use of the vaginal route for drainage where possible, thus avoiding the tendency to obstinate fistillous openings.

THERAPEUTICS OF SOME SKIN AFFECTIONS.

DR. W. B. BROWN, writing in the Post Graduate for August has a few useful notes on some diseases of the skin.

Scabies.—The skin should be scrubbed well with soap and water and a flesh brush. The application should be applied twice a day for three days, the same clothing being worn. The ointment should then be washed off, and some bland powder applied. The treatment may require to be repeated. The following is a good ointment:

℞ Potass. Carbonat, ℥ss.
Sulph. Sublim, ℥i.
Adipis, ℥iv.
M.

Sycosis Barba.—There are two forms of this disease: One is due to an ordinary pus producing organism, and the skin is acutely inflamed, there are a number of pustules, and very little induration around these. The

other form is due to the fungi of ringworn, and the condition is more limited, more sharply defined, markedly infiltrated and nodular, the pustules are firmer, the inflammation is indolent, and the fungi is found on the hairs. These may be epilated, if the process be not too painful. It should be shaved every second day, or kept close cut. In very acute cases the following may be used :

℞ Bismuth. Subnitrat. ℥ii.
Acid. Salicyl. grs. xv.
Adipis, ℥i.
M.

This may be followed later by a stronger ointment such as :

℞ Ung. Hydrarg. Ox. Rub. ℥ii.
Ung. Sulphur. ℥iv.
M. Ung. Zinc. Ox. ℥ii

This salve may be employed from the first in most cases. The ointment should be bound on the parts at night.

Acne.—There are the simple and indurated types. A comedone compressor may be required, the digestion should be regulated, the use of hot water on the skin should be forbidden, night and morning a simple toilet soap and cold water, green soap in indolent cases, and the following white lotion :

℞ Zinc. Sulphat.
Potass. Sulphuret.
Sulph. Precipitat. aa grs. xv to ℥i.
Aq. rosæ ℥i.
M.

Apply as often as convenient. It is not necessary to cause dermatitis, only a dryness and desquamation.

Eczema Seborrhoicum—When the scalp alone is affected the following lotion is useful :

℞ Hydrarg. Bichlor. gr. i.
Resorcin, ℥i.
Chloral Hydrat, ℥i.
Ol. Ricini, gtts x.
Spts. Vini, ℥iv.
M.

The purest resorcin must be employed, else it may discolor the hair.

In patchy or general infiltration of the scalp, an ointment is often more useful and the following gives excellent results :

℞ Resorcin, grs. xv—grs. xxv.
Sulph. Sublim. ℥i.
Adipis Benzoat. ℥i.
M.

On the nose and cheeks, employ the white lotion for acne. In lesions on the rest of the body, resorcin, in 1 per cent. to 20 per cent. in ointment is most useful.

DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville,
Fellow of the British Laryngological Rhinological, and Otological Society.

REMARKS ON CHOLESTEATOMA OF THE MIDDLE EAR.

DUNDAS GRANT, F.R.C.S., in the *Journal of Laryngology* for October, has a very instructive paper on this topic. He believes the cholesteatoma is formed in the antrum and adjacent cavities, by proliferation of the epithelium on the outer surface of the membrana tympani, over the granulations of the attic and antrum, until they are covered with a cicatrix, which may be a fair substitute for skin. Grant endeavors in his operative work to leave this membrane intact, and finds his cases do much better and get well much more rapidly. Most operators curette the walls, and remove the pearly membrane; but Grant opposes this strongly, as he looks on the cholesteatoma as a "desquamation dermatitis," the stages being the formation of a derma, lining the cavity, then the inflammation of this derma, resulting in desquamation, and the agmination of desquamation products.

A CASE OF REMOVAL OF THE EPIGLOTTIS FOR TUBERCULAR DISEASE.

R. LAKE, F.R.C.S., at the May meeting of the London Laryngological Society, and reported in the *Journal of Laryngology*, cites a very interesting case of a man, aged thirty, suffering from dysphagia. Laryngeal tuberculosis was diagnosed, and slight crepitations were found in one apex. Local treatment was adopted for two weeks, but the patient, getting worse, his epiglottis was removed with a hot snare. Three weeks later, the stump was quite healed and healthy, but the arytænoid regions were still slightly swoollen, while his lungs were apparently healthy.

CONTRIBUTIONS TO THE FUNCTIONAL EXAMINATION OF DEAF MUTES IN DENMARK.

PROFESSOR SCHMIEGELOW has examined 185 pupils from deaf mute asylums in Denmark. Of these, 51 (28 per cent.) were found to be absolutely deaf, but 133 (72 per cent.) had more or less tone—hearing power. These residua were tested by Bezold's continuous series of tones, and an interesting comparison is made between the ranges of

audition (amount of residual scale heard) of those hearing various vowels and those unable to do so. Among the 185 pupils, 19 were found to be suffering from chronic foetid, purulent otorrhoea, depending on median-otitis, with polypi and caries of the ossicles and petrous bone, of the dangers these guardians of the pupils seem to be quite ignorant. Others had occluding masses of cerumen, foreign bodies in the ear, post nasal adenoid vegetations, and various chronic, and acute affections of the nose and naso-pharynx. On the strength of these observations, he insists very strongly on the obvious necessity for the appointment of aural surgeons to all institutions for deaf mutes, and for the inspection of all pupils, or at least once a year. The reviewer of this work for the *Journal of Laryngology* says "that there appears to be a disinclination on the part of teachers of lip-reading, to allow of any interference with the inmates of deaf mute asylums on the part of aural surgeons." Continuing he says, "It is quite possible that, by treatment of the ears, and consciencious cultivation of the residumn of audition by 'Hörnbungen,' some of these pupils might be enabled to acquire language through the normal channel. We trust that in time the committees of these schools will take such evidence as that of Professor Schmiegelow to heart, and institute the necessary reforms, even at the risk of breaking down some over-cherished traditions."

ELECTROLYSIS OF THE EUSTACHIAN TUBE.

PIERCE has experimented in the treatment by electrolysis for narrowing of the Eustachian tube and concludes that in otosclerotic disease it is useless, and that in the great majority of catarrhal diseases it has no advantage over other methods of treatment. Only in a few cases where there is probably a soft exudate near the isthmus, may it be regarded as of value.—*Jour. A.M.A.*

GASSERIAN GANGLION IN MIDDLE-EAR SUPPURATION.

HILGERMANN first reviews the anatomical relations and shows the paths which the suppurative inflammation may follow to reach and involve the Gasserian ganglion. Cases where infection has followed the path are rare. He reports one from Von Troeltsch and mentions one from Ostman. He also reports a case of his own observation in which the autopsy showed the Gasserian ganglion bathed in pus after acute mastoid disease, and others where meningitis was transmitted through the cavernous sinus or the cavity of Meckel, though the paths in all could not be so accurately ascertained.—*Jour. A.M.A.*

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

THE annual meeting of the Montreal Medico-Chirurgical Society for the election of officers was held on December 19th, and the result of the ballot was as follows :

President—Dr. H. S. Birkett.
Vice-President—Dr. John A. Macdonald.
Treasurer—Dr. Alfred T. Bazin.
Secretary—Dr. A. Mackenzie Forbes.

Dr. James A. Jack was elected a Trustee to succeed Dr. G. A. Brown, who has retired.

The main business of the evening was followed by a very enjoyable smoking concert; one of the most successful ever held by the society. The committee in charge selected the best entertainers from the medical profession in the city, and well deserved the vote of thanks tendered them at the end of the programme. Among those who took part were Drs. Drummond, Harvey, Craig, Morphy, and Lauterman.

The first meeting of the new year was held in the Society's rooms on January 2nd, when the retiring officers read the reports. Dr. Armstrong, after congratulating the Society on its choice of Dr. Birkett as president, read a brief *résumé* of the work done during the past year. The members on the roll numbered 199, and the average attendance at the meetings was 45.

Besides the reading of papers, discussions and examination of living cases and pathological specimens, the society had been active in the direction of public hygiene. The milk commission in particular had done good work, and it could be said positively that the milk supply of the city had greatly improved since this work had been commenced. The Civic Hospital muddle had also been partially straightened out by the efforts of the society, and now that the Notre Dame Hospital had accepted the offer of the aldermen, and that as soon as the General Hospital could properly arrange its charter the Protestant Hospital would be provided for, it looked as if the matter would at length be settled.

In concluding he suggested that this year a special effort be made to investigate the water supply of the city. Small towns on the St. Lawrence above the in-take had been growing rapidly, navigation was also

continually on the increase, with consequent increase of contamination, hence it was time that active steps were being taken to see whether the water supply was pure or not, and in case of impurities being found, to take definite action in the matter.

Dr. Bazin then read the financial statement, which showed that the exchequer was in a very flourishing condition.

Dr. Birkett made a short speech, asking for the support of all the members, and stating that he intended to begin the meetings promptly at 8.30, and consequently hoped for a more punctual appearance of those who intended to be present.

In the absence of Dr. C. F. Martin, Dr. Cantlie read a paper on 85 cases of gastric ulcer. A most interesting and complete analysis of the cases was presented, including the main features of the etiology, onset, course and result. Of the whole number, but three were males and the majority of the others were domestic servants. Pain was a very common symptom, but was not localized in more than half of the cases. Pain and haemorrhage occurred in 44 cases, pain without haemorrhage in 30, haemorrage without pain in 5, vomiting with haemorrhage in 52, vomiting without haemorrhage in 26, haemorrhage without other vomiting in 4. In cases operated on by Dr. Bell, 7 made a good recovery, and in every case there was a general peritonitis from perforation. In the case which died a huge erosion was found in the stomach wall. One other case in the series died, on the medical side, and post mortem multiple minute points of haemorrhage were found all over the stomach wall.

The stomach tube was so seldom used that nothing definite could be said about the stomach contents.

In the discussion which followed, Dr. F. W. Campbell said that a definite diagnosis of gastric ulcer was no easy matter. He cited a case in which Drs. Osler and Geo. Ross had diagnosed gastric ulcer, while Dr. Palmer Howard had diagnosed duodenal ulcer. He himself had agreed with the former. At this time the patient could partake only of the smallest quantity of liquids without being prostrated with intense pain. Not obtaining much relief, he consulted two American specialists, who pronounced the trouble to be due to his liver. Immediately he experienced great relief and partook of hearty meals for several weeks. On returning home, and his doctors persisting in their diagnosis, he had a return of pain and died shortly, of a haemorrhage in the bowel. The post mortem revealed a large ulcer in the duodenum. How such relief from pain could come on as it did, was past his comprehension, and he would be pleased if anyone could explain it. Dr. Finley remarked that the number of males was very small, and he was sure that similar

records from the General Hospital would vary the percentage materially. At the present moment three men were in the wards with gastric ulcer. He had seen many cases in sailors, undoubtedly due to their diet and mode of life. Dr. Stewart agreed with Dr. Campbell when he mentioned the difficulty of the diagnosis, and he advised the physician always to treat the condition as if it were really a gastric ulcer. Dr. Hamilton thought that a great deal of benefit would arise from finding out the subsequent histories of the cases. He personally knew of two of those mentioned as having been operated upon several years ago, who were at present in good health and following their occupation without any discomfort.

Dr. Elder reported a case of perforation in typhoid followed by operation and recovery. The patient gave a history of feeling poorly for about two weeks when he was advised by his physician to go to bed. He had a slight fever and increase in pulse rate, loss of appetite and a few other symptoms pointing towards typhoid fever, but suddenly on the third day after he had taken to bed he was seized with severe abdominal pains, the abdomen became distended and the walls rigid, little change was seen in the pulse and temperature.

He was taken to the hospital and an operation performed. On opening the abdomen a general peritonitis was seen, and a perforation found in the usual site about a foot above the ileo-caecal valve. This was closed with silk sutures and a search was then made for further perforations, none were found, and no other ulcerated spots could be detected. After the customary toilet, drainage tubes were inserted into the abdomen and the wound partially closed. The temperature dropped almost at once and the patient made an uninterrupted recovery, without showing any rose spots or enlarged spleen and without giving the widal reaction.

Dr. Shepherd congratulated Dr. Elder on the recovery, but expressed himself as being sceptical in regard to the diagnosis. Few points went to show that the case was one of typhoid, and several were against it. Dr. Finley also doubted the diagnosis on the same ground as Dr. Shepherd. Dr. Armstrong said that a case of recovery from typhoid perforation was worth recording, the percentage of recoveries was improving and would still improve. The diagnosis was difficult but in case of doubt an operation should be performed for certainly more lives would be saved by early interference than would be lost by mistaken diagnosis, the more so as such a marked mortality was noticed after perforation had existed for more than twelve hours. Dr. Adami supported the diagnosis offered and said that too much dependence was put upon

Widal reaction at the present day, and that it was to be remembered that 5 per cent. of all cases did not give the reaction.

Dr. Elder in reply to those who questioned his diagnosis stated that the ulcer was typically typhoid in position and appearance, there were no signs of chronic inflammation to be seen or felt. He admitted that the diagnosis of typhoid was not confirmed, and expressed himself as willing to accept a better one as soon as it presented itself, but as no suggestion had been offered by anyone present he still held to the one originally made.

At the meeting of the Students Medical Society of McGill University held on January 9th, Dr. Armstrong delivered an address on the History and Origin of Medicine in relation to Students. The lecturer went back to the very beginning of medicine and named the first surgeon and accoucheur—Adam; he then took up the first instrument maker, Tubal-Cain, and proceeded to show that little was known of the medicine of the antedeluvians, but that one thing was certain, medicine became gradually less of an art and more of a science. Practical men gradually became known by their work and people flocked to them according as they showed good results. Teachers of necessity arose, and gathered about them students whose numbers varied as the fame of their instructor. Of these the greatest was Hippocrates who swept away the veil of mysticism and taught his pupils to see things as they were. Pioneers in every department appeared when once this obstacle was removed, and down to the present day there have been men who by single merit and perseverance have made one great leap forward carrying everything with them eventually, such names as Vesalius, Fallopius, Lännec Jenner, Lister and Virchow at once are suggested to our minds. There have also arisen quacks, who have arrived on the scene with many a flourish of trumpets and disappeared quietly without having advanced medicine in any department. In a college career a student is apt to make plans, these he finds must be altered from time to time to meet emergencies, but it is well to have some definite goal and to remember that you can never shoot higher than your aim. A college course is an excellent place to find out what manner of a man you are and how you compare with the majority. Possibly you excel in book learning, in keenness of perception, in original thought. Remember your strong point, make a note of the subject, this is the line in which you may hope to do the best work, make a hobby of it but don't become narrow.

The greater number of students become general practitioners. This is as it should be for this is the end and aim of a medical school. A few may have the faculty of teaching, let not this talent lie in the ground

but use it, a teacher's work is laborious and responsible, but a good teacher is a treasure to any college. If you take up special work of this sort do it well, you may work for years and see nothing ahead, but some day one of the bright lights will go out and the word will not be "who is to fill the place" but "there is the man fitted by years of work for this position." Some of you may have the high faculty of facility in research work. This indeed is a gift to be cultivated. Search out the best in other countries and then come back to work. You will find it a long and severe road with little financial remuneration, but what a field for discovery, for we are only on the boundaries of this unexplored country. We have denuded smallpox and diphtheria of half their terrors, scarletina has been dealt a severe blow, and may we not hope for greater things in the treatment of cancer and tuberculosis?

After some songs and speeches Dr. Armstrong was tendered a hearty vote of thanks and the meeting adjourned.

THE RECENT MEETING OF THE ONTARIO PROVINCIAL BOARD OF HEALTH.

ATTENTION was called to the fact that sometimes medical men are required to attend infectious cases among the pauper class. The Health Act provides that payment should be made for such attendance. The local board of health can authorize payment. Steps were taken to issue instructions to barbers, with the view of preventing infectious skin diseases; and for the proper cleansing of towels, brushes, razors, etc. Dr. John A. Amyot has been at work under the Provincial Board of Health doing good service investigating the changes that take place in sewage as the result of bacterial action; and also the effects on sewage of the admixture with it of the products of manufacture and commerce. To further the great advantages to be secured from proper vaccination, the Board contemplates some useful amendments to the present act. We wish the Board every success in its efforts in this matter. Vaccination and re-vaccination is the only safeguard against smallpox.

The Copley medal has been awarded to Lord Lister. It was founded by Sir Godfrey Copley, in 1709. It is given for such research as may be deemed worthy of it.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., M.R.C.S., Eng., Halifax.

A MEETING of the Halifax Branch of the British Medical Association was held at the Nova Scotia Hospital for the Insane, on the evening of December 10th. The members assembled at the ferry wharf, crossed over to Dartmouth and drove down to the hospital in sleighs.

Dr. Hattie and his assistants, Drs. MacKenzie and Lawlor, had a very interesting programme prepared and the meeting proved to be the most instructive so far this season.

Dr. Hattie presented a case of Katatonia. The patient was a young man of some twenty-four years of age and mentally a degenerate. He was subject to periodic states of catalepsy and was in such a state on this occasion. The rigidity of the muscles was most marked and resistance was equally strong for both flexion and extension. When placed in any position the limb remained so for an indefinite period. The muscles relaxed during sleep. The patient's extremities were cyanosed, and his salivary glands were pouring forth an unusual quantity of saliva. He also exhibited "verbigeration"—the repetition of a syllable—while speaking. Dr. Hattie pronounced the prognosis in this case as very unfavorable.

Dr. MacKenzie presented the second case.

The patient, a middle aged man, suffering from general paresis, while out for his afternoon walk, was violently assaulted by another patient, who at the time held a pipe in his right hand. After the assault a piece of the pipe, consisting of the bowl and part of the stem, was picked up—the remainder was missing. The injured man complained of nothing at the time. He had a gash just below the superior internal angle of the orbit from which slight bleeding took place In the evening he was attacked with vomiting and suffered from intense headache. On further examination it proved that the remainder of the pipe—the mouthpiece and part of the stem—in all about 2½ inches, was imbedded deeply in the orbit. This was with difficulty extracted with forceps Dr. MacKenzie's opinion was that the stem had coursed along the inner wall of the orbit and had entered the sphenoidal fissure. The optic nerve must have been destroyed for he has since been totally blind in this eye. The muscles of the eye were for a time paralized, showing probable pressure on the nerves passing through the fissure. These muscles have since regained their power. The wound healed without supparation.

Dr. Lawlor then showed a patient who had sustained a fracture of the right malar bone. Beyond some slight flattening there was now nothing to be seen.

The second part of the programme Dr. Hattie happily termed a 'symposium" on mental diseases. He himself read a very interesting. paper on "Clinical Aspects and Classification of Mental Diseases." Dr. MacKenzie's paper was on the "Therapeutics of Mental Diseases," while Dr. Lawlor discussed the "Pathology of Mental Diseases." The papers were interesting and instructive and gave evidence of careful preparation and thought on the part of the writers.

The third part of the programme was carried out in the dining room of the Hospital, where supper was served to the members. After a vote of thanks was tendered to Dr. Hattie and his colleagues, the meeting adjourned.

PERSONAL.

Dr. S. E. Shaw, of Waterville, N.S., was married on October 23rd to Miss Clara Louise Crispo, of Berwick, but late of Montreal.

The wedding took place on November 5th of Dr. M. D. McKenzie, of Parrsboro, N.S., to Miss Laura Tucker, daughter of M. L. Tucker, Esq

We regret to announce that Dr. D. H. Muir, of Truro, has been seriously ill. Latest reports, however, announce that he is improving.

Dr. M. A. O'Brien, of Noel, N. S., was recently operated upon for a strangulated inguinal hernia at the Victoria General Hospital. We are glad to say that the operation was successful.

Among the members of the recently appointed medical council for the Yukon are two young Nova Scotians, namely, Dr. McLeod, the President, and Dr. Alfred Thompson, one of the Executive.

Dr. Halliday, of Halifax, Provincial Bacteriologist for Nova Scotia, returned home in January, fully restored to health. Dr. Halliday was compelled to leave Halifax some months ago, and we are pleased to learn that the change of climate has had the desired effect. Dr. Halliday's friends in the profession will welcome his return.

We regret to have to report a very serious accident that happened to Dr. S. R. Jenkins, of Charlottetown. While operating on a septic case in the hospital, Dr. Jenkins accidently introduced some of the material into his eye. The inflammatory process spread with such rapidity that enucleation of the eye was necessitated. We are glad to say, however, that the doctors condition is now most satisfactory, and that the other eye has happily escaped.

MEDICAL SOCIETIES.

TORONTO MEDICAL SOCIETY.

(STATED MEETING DEC. 18th, 1902.)

At the Orthopedic Hospital, the President, Dr. Hay, in the chair.

Dr. Mackenzie showed, first, an x-ray of the foot with injury to the astragalus and loss of its arch. Also a piece of bone blocking the motion of the astragalus. Second, a case of injury to the shoulder, which was more painful and tender after three months with nothing abnormal to be seen. Drs. Silverthorne, Carveth, Bryans and Webster reported similar cases of ankylosis of the shoulder. Dr. Hooper said that Cole, of New York held that the pain was due to hyperextension, at the time of injury, and used the thermo-cautry. Dr. Dickson related a case treated with the static spark to develop the muscles. Dr. Price-Brown had treated a case with counter irritation.

In reply, Dr. McKenzie thought that the pseudo-ankylosis was due to spasm of the muscles. He proposed to see if ankylosis was present under an anaesthetic, if so, to break it down. Dr. McKenzie then showed some cases of club-foot. He reported thirty cases, from 16 to 46 years of age, treated without the removal of any bone or open incision. Correction was obtained by degrees and with tenotomies.

Dr. Galloway showed, first, a case of deformity of the leg, age 17 months, born with left foot deformed, and tibia bent outward and forward, also a case of a girl with correction done of both tibiae for bow leg. He said that the proper time to operate was after hope of correction was done from growth of the patient. Second, lemi-hypertrophy of the lower extremity. This case was very interesting. There was an enlargement of the hip, thigh, leg and foot to an enormous extension. In discussion Dr. Beatty said that he had seen a case in London in which the glands of the pelvis were sarcomatous with localized swellings which had been evacuated at intervals. Dr. Hunter asked had any attempt been made to control the blood supply as ligating the artery? Dr. Carveth suggested some central nerve lesion as a cause. Dr. J. McCoullough said there was some suggestion of nerve disturbance In reply, Dr. Galloway said it is very vascular; the collateral circulation is already established. Third, shortening of the patallar ligament. This was necessary to give the proper strength to the knee joint, as the patella was situate above the joint. A

piece was taken out and kangeroo tendon used for suture. Dr. Beatty asked why the knee was extended rather than on an incline plane, also how could the patella be brought down before operation ?

Dr. Webster showed a case of web-fingers on which he had operated, Dr. Wilson, in discussing the case, said that the trouble was to prevent the growth of cicatrix in the clef.

(Stated Meeting, Jan. 8th, 1903.)

The President, Dr. Hay asked Dr. Hunter to take the chair while he showed a case of gun shot wound in the arm. In April last, while dragging a gun, it went off, shattering the arm at the junction of the middle and lower thirds, and injuring the bone. There was now a sinus and some discharge and considerable contracture in the flexed positions of the forearm. Dr. Mckenzie said that the contracture was due to cicatricial tissue in the muscles, and the insertion of them, or the tendons, into the provisional callus thrown out. Dr. Webster said that the median nerve was involved, and accounted for some of the atrophy and loss of sensation. Dr. Feguson said that the biceps had, he thought, taken a new fixture at the point of injury, also the triceps. From the nerve point of view, both the flexors and extensors were involved. The ulnar was partially destroyed, as were also the musculo-spiral and median. Dr. Hunter read his paper on "The Vomiting of Pregnancy". Dr. Bryan related the histories of two cases. He thought that the essayist had waited too long before interfering. Dr. Webster said that a prophylactic measure was the prohibition of the corset. Dr. Ferguson related two cases. One nullipara, the other 6para. As to causes, erosions, flexious, displacements, tubes and ovaries, etc., all failed to explain hyperemesis gravidarum. They might act as exciting causes, but the real causes must be in some excitable condition of the nervous system. The same condition was found in hysteria. The treatment was regeminal, dietetic, medicinal, and surgical, corsets could not cause this condition. Dr. Starr said that he had succeeded in a bad case by the use of 40 gr. chloral, with ʒii of bromide of potash, given by high enema, repeated in two hours. After a sleep of 9 hours, there was complete recovery. Dr. McPhedran said that the usual dose of strychnine, as given hypodemically, was of very little moment. He had given as high as one-tenth of a grain. As a cardiac stimulant it must be given in large doses. He was quite convinced that there was no greater fallacy than that all their troubles were due to the corset. In reply, Dr. Hunter said this patient was very susceptible to strychnine, tetanic spasms being produced by one-thirtieth of a grain.

Dr. F. N. G. Starr read a paper, "A Plea for the Open Method of Treating Fractures of the Patella". Dr. Ferguson complimented Dr. Starr on his paper. He was glad that Dr. Starr had the courage of his convictions. Mr. Lane and Sir Wm. Bennett had recently been engaged in a discussion of the subject. In fractures of the patella due to tears by muscular force, it was the ideal method ; but was not always necessary in those due to blows, because the lateral ligaments of the patalla, might not be injured, and there might be but little separation of the fragments. Suturing should not be delayed beyond one week. Dr. McKenzie asked to be allowed to digress. He then related a case of fracture of the external condyle of the humerous, with poor result, which had later been cut in upon and wired with good result. Dr. Beatty said one essential point was early treatment.

PNEUMONIA IN CHILDREN.

IN the July issue of the *Post Graduate* Floyd M. Crandall, of New York, has some comments on the above subject. He remarks that the disease in the young is often insidious in its onset, irregular in its development, uncertain in its course, and fatal in its termination. In the adult there is an exudate of red and white corpuscles into the air spaces, but very little inflammation of the bronchial mucous membrane. In the broncho-pneumonia of children there is extensive inflammation of the bronchial mucous membrane and bronchial walls, as well as the alveoli. In the pneumonia of children these differences cause a marked difference in the clinical progress of the disease in the adult and the child. In the latter, there is much risk of connective tissue increase and consolidation even for weeks or months. In some instances the disease lies midway between the two forms, and it is very difficult to recognize which group it properly belongs to. In broncho-pneumonia, or, as it is sometimes called, lobular, there may be so many lobules involved that there is a large area of dulness produced. It is the character of the disease and not the extent of dulness that should be borne in mind. During the first two years of life the disease is usually of the bronco-pneumonic type. Careful examinations can generally detect portions where there are fine rôles, and more or less bronchial breathing. Lobar pneumonia in children is not usually fatal, whereas broncho-pneumonia is a disease with a high death rate.

UNIVERSITIES AND COLLEGES.

WESTERN UNIVERSITY MEDICAL DEPARTMENT.

THIS Medical College is now in its 21st session. The tickets for attendance on lectures and the degree in medicine of the Western University are recognized by the several colleges and licensing bodies in Great Britain. Last year a new and commodious building was erected for the Medical Department.

There are at present 25 professors and lecturers in charge of the various classes. From 80 to 90 students are in attendance at the College.

The following fees are charged: Matriculation, $5; Registration, $5; deposit against damage to property, $5; Tuition each year for four years, $90; Annual examinations, $5; Graduation, M.D., $25; Perpetual Hospital Ticket, $20; Six months' Hospital, $6. A third course is free on any subject, except where material is required, which is charged for. Material for dissection is charged for in addition to the above fees.

Medals, Prizes, and Scholarships are awarded as follows:

A gold and a silver medal will be awarded to the students of the graduating class, ranking first and second on the work of the 2nd, 3rd, and 4th years. The candidates spend one of their sessions at this College, and must obtain an aggregate of 75 per cent. on the above examinations, and must not fall below 50 per cent. on any single subject.

A scholarship of $25 will be awarded to the student who obtains the highest aggregate marks on the examinations for each of the 1st, 2nd, and 3rd years.

Certificates of honour are awarded to students who obtain 75 per cent. of the marks on the primary and final examinations.

The two students taking first and second place in the 3rd and 4th years' examination will be nominated for hospital assistants.

Clinical instruction is given at the Victoria Hospital of 170 beds; and the other London charities, as Mount Hope Orphan Asylum, the Protestant Orphan Home, the Convalescent Home, the Aged People's Home, St. Joseph's Hospital. Much attention is given to this aspect of the medical curriculum. Diseases of the mind are practically taught by clinics in the wards of the Asylum. This course is compulsory.

The matriculation in medicine embraces the following subjects: Arithmetic; algebra, including simple equations; Latin, translation and

grammar, Cæsar Billum Gallicum, Books I, II, or V, VI, Cicero, Pro Lege Manilla, Virgil, Æneid, Book I or II; and one of the following: Greek, Xenophin's Unabasis, Book I, or First Chapter St. John's Gospel; French, Voltaire, Charles XII, any one book; German, Schiller's Thirty Year's War, Book I; Natural Philosophy, Stewart's Physics.

Graduates in arts of any recognized university in His Majesty's dominions; or those who have passed the matriculation examination of the College of Physicians and Surgeons of Ontario, or Quebec; or who have passed the High School Primary, or Junior, or Senior Leaving with Latin, will be admitted without further examinations.

The medical curriculum calls for compliance with the following regulations: That the candidate has fulfilled the requirements regarding the matriculation; that he has been engaged in the study of medicine for a period of four years, attending lectures during four sessions of six months each, in some university or recognized school of medicine; that he has attended two courses of one hundred lectures on anatomy, practical anatomy, practice of medicine, surgery, theoretical chemistry, midwifery and diseases of women and children, materia medica and therapeutics, physiology, clinical medicine, clinical surgery; one course of fifty lectures each in medical jurisprudence, physics and practical chemistry; one course of twenty-five lectures each on toxicology, sanitary science, and surgical anatomy; one course of fifty practical demonstrations on normal and pathological histology; one course of twenty lectures each in botany and zoology, and one course on mental diseases and one on anæsthesia; that he has attended twenty-four months the practice of the Victoria Hospital, or that of a recognized hospital; that he has spent at least six months at a lying-in hospital, and had in charge six cases of labor; that he has attended one session in the College and procurred the tickets on the final branches; and that he has been engaged with a practitioner or druggist at least six months, dispensing medicines.

The first year's examination covers anatomy, physology, chemistry, materia medica, practical anatomy, botany, physics, zoology.

The second year, descriptive anatomy, practical anatomy, physiology, histology, general and medical chemistry, materia medica.

The third year, medical jurisprudence, surgical anatomy, sanitary science, general pathology, bacteriology, clinical medicine, clinical surgery, toxicology.

The fourth year, theory and practice of medicine, principles and practice of surgery, midwifery and gynæcology, clinical medicine, clinical surgery, diseases of children, therapeutics, diseases of eye, ear and throat.

Candidates must make fifty per cent. of the total marks, and also a minimum of forty per cent. on each subject.

At the end of the course the University confers the degree of M.D.

QUEEN'S UNIVERSITY MEDICAL FACULTY.

THE Medical Faculty is known as the Royal College of Physicians and Surgeons of Kingston. It is now in its 49th session. In charge of its various branches of study there is a staff of some 25 professors. There are in attendance at the College about 185 students.

The certificates of attendance are accepted by the various colleges in great Britain and the degree of M.D. from Queen's University entitles the holder to the privileges accorded to any other Colonial College.

Students receive their clinical instruction in the Kingston General Hospital, the Hotel Dieu, and at the Hospital for the Insane. The Kingston General Hospital has 200 beds.

The fees are: Matriculation, $5; degree of M.D., $25; degree of C.M., $5; Diploma of Royal College of Physicians and Surgeons, $20; Fellowship of the Royal College of Physicians and Surgeons, $50; Sessional Fee for each of the first four years, $100; fifth year, if taken, $50; Supplemental Examinations each year, $10; hospital ticket, single session, $7; ad eundem statum, $10.

The following prizes are open for competition:

The Dr. Hayunga prize of some standard work on surgery is awarded for the best dissection of an upper extremity.

A prize of $25 is awarded to the student obtaining the highest marks on second year's examination on anatomy, physiology, and chemistry.

At the end of the second session a standard work on medicine, $10 for the highest marks on materia medica is awarded by Dr. Hayunga.

At the end of the third session the Dean Fowler Scholarship, $50 is presented to the student making the highest marks for the year.

The Chancellor's scholarship of $70 is open to the student who takes the Ontario Medical Council examinations, and is held only if the winner takes a fifth year at Queen's, or in Europe for a like period. The marks for the four years are counted.

A University medal is given at the end of the 4th year for highest standing in medicine, clinical medicine, pathology, bacteriology, sanitary science and jurisprudence.

A medal at end of fourth year is awarded for the highest standing in surgery, clinical surgery, obstetrics, gynaecology, medical and surgical anatomy.

Three house surgeonships for the highest standing in 4th year. All previous examinations must have been passed. These are not open to the one holding the Chancellor's scholarship.

A prize of $25 given by Dr. Clarke to the student who passes the best examination in mental diseases.

Fifth year students holding the appointments of demonstrators in materia medica and pharmacy, and physiology and histology, will be exempt from the fee of $50.

The matriculation subjects are: English language, grammar and composition, as required for second class teachers' certificates; Arithmetic, with vulgar and decimal fractions; algebra, including simple equations; geometry, first two books of Euclid; Latin, translations from Cornelius Nepos, Cæsar and Virgil, and grammar; natural philosophy, as in Stewart's physics, or Greek, French, or German as optional in place of physics. Graduates and matriculants in Arts from any recognized university, and all who have passed the matriculation examination prescribed by the Medical Council of Ontario, are not required to pass the above matriculation examination. The matriculation must have been passed, before the student will be credited with any of his professional examinations.

The professional curriculum for the degrees of M.D., C.M., or the college diploma, consists of a period of four years' study, which must comprise three winter sessions of at least six months each, and one session of eight months, after having passed the matriculation.

First Year. The subjects of study are Physics, Botany, Animal Biology, Anatomy, Physiology, Histology, Chemistry, Practical Anatomy, and Materia Medica. The subjects of examination are Botany, Animal Biology, Physiology, Theoretical Chemistry, Physics, and Materia Medica.

Second Year. The course of study is Anatomy, Physiology, Materia Medica, Therapeutics, Practical Pharmacy, Theoretical Chemistry, Practical Chemistry, Practical Anatomy, Histology, Embyology. The subjects of examination at the end of session are Anatomy, Physiology, Histology, Materia Medica, Therapeutics and Practical Pharmacy, Theoretical and Analytical Chemistry.

The Third Year studies are Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Obstetrics, Gynaecology and Pediatrics Jurisprudence, Pathology, Medical and Surgical Anatomy, Sanitary Science.

The subjects of examination are Medicine, Surgery, Obstetrics and Gynaecology, Pathology Jurisprudence, Medical and Surgical Anatomy, and Sanitary Science.

The Fourth Year studies are Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Obstetrics and Gynaecology, Medical and Surgical Anatomy, Pathology, Bacteriology, Diseases of Eye, Ear, Nose and Throat, and Mental Diseases. The examinations are on the same, except mental diseases which is optional.

The Fifth Year's course is Operative Surgery on the Cadaver, Sectional Anatomy, Clinical Medicine (including Physical Diagnosis), Ophthalmology, Mental Diseases, Clinical Surgery, Diseases of Women, Diseases of Children, Practical Pathology, and Bacteriology with special attention to the examination of urine, sputum, bile, stomach contents, etc.

All students must present certificates of having compounded medicine for a period of six months in the office of a regularly qualified medical practitioner; of having attended at least six cases of midwifery; of having reported six medical and six surgical cases; of having attended and reported on six post mortem examinations, and of having attended hospital practice for at least twenty-four months.

Graduates in Arts may complete their Medical curriculum in three years.

TORONTO WESTERN HOSPITAL NURSES.

THE following graduates from the training school for nurses of the Toronto Western have been appointed to a number of hospitals as lady superintendents or head nurses: Miss Annie Inch, lady superintendent and head nurse, Stonega Hospital, Stonega, Virginia; Miss Mabel Ireland. head nurse, eye and ear wards, Manhattan Hospital, New York; Miss Pauline Ottaway, head nurse, Aberdeen Hospital, New Glasgow, N.S.; Miss Estella Gunn, lady superintendent and head nurse, Royal Alexandra Hospital, Fergus, Ont.; Mrs. Annie Jorke, lady superintendent, Orthopaedic Hospital, Toronto: Miss Vandewater, formerly lady superintendent of the Toronto Western Hospital, lady superintendent Nashville Hospital, Tennessee, and Miss Eva Boggs to be head nurse in the same.

THE CANADA LANCET

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EDITORIAL.

THE ONTARIO MEDICAL COUNCIL CURRICULUM.

IN our last issue we had something to say on the subject of the entrance standard ; and then took the position that the Council should adopt the pass matriculation with the honor subjects in English and Latin, and suggested that of the present optional subjects, the pass Greek might be made obligatory. It was also stated that the Council could well afford to accept the first year's Arts standing in a recognized university, as this would encourage a still further general education and culture on the part of the students. We now purpose saying a few words on the professional part of the Council curriculum. In doing so, we disclaim any fault-finding spirit. On the contrary, we recognize the great services which the Medical Council has rendered to both medical education and the medical profession. In the first place, the Council holds three examinations. The primary examination is written and oral, and takes place at the end of the second winter session on the following subjects : (*a*) anatomy; (*b*) physiology and histology; (*c*) chemistry (theoretical and practical) and, (*d*) materia medica and pharmacy. Now, we think this is not a good division of the work. To allow the first year to pass without an examination on the work of the session is to encourage a tendency to cram in the second session.

The second examination is called the intermediate, and is held at the end of the fourth session on the following branches :—(*a*) medical, surgical and topographical anatomy ; (*b*) principles and practice of medicine ; (*c*) general pathology and bacteriology ; (*d*) surgery, other than operative ; (*e*) surgery, operative ; (*f*) midwifery, other than operative ; (*g*) midwifery, operative ; (*h*) medical jurisprudence, including toxicology and mental diseases ; (*i*) sanitary science ; (*j*) diseases of children ; (*k*) diseases of women; and, (*l*) therapeutics. This examination, like the primary, is both written and oral. It is also open to the same criticism of leaving a year, the third session, without an examination, giving rise to careless work on the one hand and to cramming on the other. It is true, the Council requires the students to furnish a certificate of having

passed the examinations of the College they attended at the end of the first and third sessions; but this seems like delegating the Council's functions to other bodies. We are decidedly of the opinion that it would be better if the Council held annual examinations on the actual work of the session.

But there is a much more serious objection to the intermediate examination than either of the above. It embraces too many subjects. To ask a student to pass a written and oral examination upon so many branches of study, is tantamount to inviting failures. It would be much better to have the work divided, and take a certain amount each year. To ask them to carry so much work for two years is neither fair to teachers nor students.

The final examination is held at the end of the fifth session and is both clinical and oral on the following subjects: (*a*) clinical medicine, (*b*) clinical surgery, (*c*) diseases of women, and (*d*) diseases of children, medical and surgical. As things now stand, there are serious defects in this fifth session. It is intended for clinical work, and the student may put in the time at some recognized hospital, or six months with a registered practitioner, and six months at some hospital, dispensary, or laboratory. The difficulty here, however, is that the student has no legal status. He cannot legally act as a resident physician or surgeon in a hospital, nor can he legally assist the practitioner with whom he may be putting in part of the fifth year. If in any of these capacities, he does anything, and trouble arises, the question of his being an unqualified assistant is at once raised. This state of affairs renders it very difficult for the students to find opportunities for usefully putting in the fifth year on clinical work, as demanded by the council.

Now, as to the remedies for these defects. In the first place, we would urge an annual examination. In the first session, a definite amount of anatomy and physiology, and, say, theoretical chemistry, should be prescribed and examined upon. For the second session there should be the remainder of the anatomy, including medical surgical and topographical, of the physiology and histology; the practical chemistry; and the materia medica and pharmacy. By this arrangement, the students have a definite amount of work to do each session; and a definite examination to pass. They are in a better position to keep their work cleaned up as they go along, there is less chance of failure, and duplication of attendance upon the same lectures is avoided.

In the seoond place, the subjects included in the intermediate examination should be divided into groups for the third and fourth years. For the third session might be assigned (*a*) general pathology and bac-

teriology, (*b*) medical jurisprudence and toxicology, (*c*) sanitary science, and (*d*) therapeutics. For the fourth there could be (*a*) the principles and practice of medicine, (*b*) surgery, other than operative, (*c*) midwifery, other than operative, (*d*) diseases of children, and (*e*) diseases of women. Examinations on these subjects at the end of the third and fourth sessions would finish the thoroughly scientific and theoretical branches of the curriculum. For the final examination there would remain (*a*) operative surgery, (*b*) operative midwifery, (*c*) clinical medicine, and mental diseases, (*d*) clinical surgery, and (*e*) clinical diseases of women and children.

But to clear up the work of the fifth year, and make it what it was intended to be, a year of clinical study and experience, every student, who is not serving as an interne in some hospital, should be required to spend his fifth session in actual hospital work in the study of cases in the wards, in the writing of clinical histories, in attendance on autopsies, and such like practical work. This change would make the fifth year one of definite work and progress. As it is now, we fear the fifth year is too often largely wasted, and by no fault of the student, but because he has no sure guide to follow.

LORD LISTER.

JOSEPH Lister, who celebrated his jubilee a short time ago, was born on April 5th, 1827, at Upton, Essex. He received his early education at a school kept by a society of friends at Tottenham. He afterwards proceeded to University College, London, and obtained the degree of B.A. in 1874. He then spent five years in the study of medicine at University College and University College Hospital. While here he fell under the teaching and influence of Graham, the chemist, and Sharpey, the physiologist, both great men and destined to give to the world a far greater disciple. These teachers were aided in their efforts by Mr. Lister's father, who did such brilliant and original work in the perfecting of the microscope. On 9th December, 1852, he become a fellow of the Royal College of Surgeons. He served as dresser to Mr. Erichsen afterwards Sir J. E. Erichsen; and was house-surgeon under Mr., now Sir, Henry Thompson. He went to Edinburgh to take six weeks with Professor Syme; but ended by staying there for six years. He became professor of clinical surgery in the University of Glasgow in 1861, a position which he held till 1869. From 1869 to 1877 he filled the chair of clinical surgery in the University of Edinburgh, removing

in the latter year to London, to take the position of clinical surgery in King's College, London.

His great work on coagulation of the blood, on fermentation, and on antiseptics, has made his name familiar to the most obscure scientist and practitioner the world over. Nobly and long he fought on for his views and finally saw them triumph over every obstacle. Learned societies, universities, and crowned heads, haved vied with each other in showering honors upon him. But the greatest of all the honors is that which suffering mankind accords, in acclaiming him the greatest of all the followers of the healing art, ancient or modern.

Every department of medicine and surgery has been the gainer, because of Lister's researches. Under his guidance, surgery advanced by leaps and bounds. It is impossible to gild gold; and words in praise of Lister seem like an attempt to burnish the precious metal. Perhaps of no man are the words of Dr. Johnson so true as of Lister: *Nihil erat quod non tetigit; nihil tetigit quod non ornavit.*

EDITORIAL NOTES.

Dr. Perry G. Goldsmith's Appointment.

We learn that Dr. Goldsmith, of Belleville, has been appointed consulting specialist on diseases of the eye, ear, nose and throat to the Deaf and Dumb Institute, Belleville. We congratulate Dr. Goldsmith, and approve of the action of the Ontario Government in this matter.

Gastric Trouble in Spinal Disease.

Sir Frederick Treves in the *Practitioner* (British) for January, has an interesting article on a number of cases in which occurred marked pain and dyspepsia, with some vomiting, resulting from various diseased conditions of the spinal column. In several cases there was Potts' disease of the vertebrae. In one there was an injury from a bullet wound. In another case there was an osteo-sarcoma. These marked conditions irritated the nerves, and set up the trouble in the stomach. The writer remarks "that suspicion may be aroused as to the genuineness of a gastric trouble when pain is the all-predominating symptom, when it is intense and persisting, and when vomiting is at the same time either absent or insignificant."

The Lorenz Sensation.

For several weeks the lay press was flooded with news about the doings and sayings of Dr. Adolph Lorenz. We do not doubt that our Austrian Confrēre is a skilled orthopaedic surgeon, and his visit to America may stimulate those following this branch of surgery to renewed efforts to perfect their methods, but all this could have been accomplished in a more professional manner. More good would have come of his visit if there had been less of the newspaper pyrotechnical display. A surgeon of such eminence does not stand in need of the lay reporter. The columns of the medical journals, and the medical societies are ample means of securing publicity. It does not sound well for an eminent physician or surgeon to announce to newspaper reporters that any given line of treatment is sure to effect a cure, or that the patient is on the high road to recovery, when, a few days later, another bulletin shows the very reverse to be the case. We hope the next distinguished visitor will adopt quieter methods.

The Care of Inebriates.

It is more than likely that the coming session of the Ontario Legislature will move in the direction of providing some adequate means of treating this class. The matter has been before the profession and the public for some time, and the provisions of the proposed act are pretty well understood, having been endorsed by several medical societies, hospitals, and the prisoners aid association. The main features that have been suggested are that (1) those who are not confirmed drunkards may be fined, that they are allowed out on probation under the charge of a probation officer, and that they may pay off the fine in instalments. (2) When the drunkenness has become a disease, they are to be placed under lengthened treatment, the cost of the same to be repaid after the treatment, and while still on probation. (3) Those who cannot be reformed by these means to be sent to prison on cumulative sentences; or, if feeble and old, to be sent to a poorhouse. (4) A capitation grant to be made to hospitals to aid in the treatment of these cases; and an officer to be appointed to visit hospitals and arrange for them, or to equip cottage hospitals, or provide for proper home treatment. And (5) that three physicians be appointed without salary to act in conjunction with the above medical officer.

To this last proposition we strongly protest. Why should physicians be asked to give their services for nothing for the benefit of this class, and the Province at large? They should be paid a proper per

diem fee when on duty. We hope that when the arrangements are completed, the Act will provide suitable remuneration for the members of this advisory committee. No more responsible task could be assigned to the medical profession than the carrying out of the above provisions. It will pay to secure competent advisors, and it will pay to pay them in proportion to the duties they have to perform.

The Medical Council.

Territorial representatives: J. L. Bray, M.D., Chatham, Ont., Div. No. 1; J. Mearns, M.D., Woodstock, Ont., Div. No. 2; J. Macarthur, M D., London, Ont., Div. No. 3; J. A. Robertson, M.D., Stratford, Ont., Div. No. 4; L. Brock, M.D., Guelph, Ont., Div. No, 5; J. Henry, M.D., Orangeville, Ont., Div. No. 6; P. Stuart, M.D., Milton, Ont., Div. No. 7; S. H. Glasgow, M,D., Welland, Ont., Div. No. 8; R. Gibson. M.D.. Sault Ste Marie, Ont., Div. No. 9; E. E. King, M. D., Toronto, Ont., Div. No. 10; A. A. Macdonald, M.D., Toronto, Ont., Div. No. 11; J. H. Sangster, M.D., Port Perry, Ont., Div. No. 12; S. C. Hillier. M.D., Bowmanville, Ont., Div. No. 13; T. H. Thornton, M.D., Consecon, Ont., Div. No 14; W. Spankie, M.D., Wolfe Island, Ont., Div. No. 15; J. Lane, M.D., Mallorytown, Ont., Div. No. 16; M. O. Klotz, M.D., Ottawa, Ont., Div. No. 17.

Collegiate representatives: W. Britton, M.D., Toronto, Ont., University of Toronto; not yet appointed, University of Victoria College; V. H. Moore, M.D., Brockville, Ont., University of Queen's College; A. J. Johnson, M.D., Toronto, Ont., University of Trinity College; J. Thorburn, M.D., Toronto, Ont., Toronto School of Medicine; M. Sullivan, M.D., Kingston, Ont., Royal College of Physicians and Surgeons, Kingston; J. A. Temple, M.D., Toronto, Ont., Trinity Medical College; not yet appointed, Western University, London.

Homeopathic representatives: E. T. Adams, M.D., Toronto, Ont.; Cl. T. Campbell. M.D., London, Ont; G. Henderson, M.D., Strathroy, Ont.; L. Luton, M.D., St. Thomas, Ont.; E. A. P. Hardy, M.D., Toronto, Ont.

PERSONAL.

Dr. W. F. McKay has decided to locate at Arnprior.

Dr. and Mrs. E. W. Lambert are spending the winter in California.

Dr. J. C. R. Fitzgerald, has left Woodstock to take up his residence in St. Catharines.

Dr. R. J. Wilson, of Toronto, is recovering from his recent attack of typhoid fever.

Dr. E. J. Sanderson, of Ottawa, was married 29th of December to Miss Alma Gayfer, of Hamilton.

Dr. and Mrs. Clemens, of Toronto, were recently visiting Dr. and Mrs. McArthur, of Ottawa.

Dr. Thos. H. Mott, of Mt. Pleasant, Ont., was recently married to Miss Annie Shoemaker, of Boston.

Dr. Bruce Hewson, of Colborne, has recovered from his attack of pneumonia and is attending to his practice again.

Dr. H. J. Hassard, of Sydney, Man., was recently married to Miss Lena West, a nurse of the Toronto Western Hospital.

Dr. Farrel, of the Provincial Board of Health, recently inspected various lumber camps throughout New Ontario.

Dr. H. Wolferstan Thomas has received a faculty fellowship in pathology in McGill University.

Dr. Malcolm C. Baker, of Montreal, is steadily regaining his health, and hopes are now entertained of his recovery.

The engagement of Dr. George S. MacCarthy to Miss Audrey Blair, daughter of the minister of railways, is announced.

Dr. G. A. Charlton, has been appointed by Dr. Law, medical health officer, house surgeon in the new isolation hospital, at Ottawa.

Dr. Colbeck, of Toronto Junction, and formerly resident physician of the Toronto Western Hospital, has commenced practice in Bracebridge.

Dr. H. Irwin of Warren, Ont., is removing to Pembroke to take up his late brother's practice and expects to be there shortly.

The Board of Governors of Toronto Western Hospital acknowledge recent donations to the amount of $1,231.

St. Michael's Hospital, Toronto, intends adding a new wing at an early date to its present accommodation.

Dr. Beck was seriously ill a short time ago, suffering from blood poisoning, the result of a slight wound sustained while performing an operation.

Dr. John R. Stone, Superintendent of the Parry Sound Hospital spent about a couple of months taking a post-graduate course, in New York.

Dr. G. N. Smillie, of Montreal, has commenced suit against the estate of the late Henry Hogan of that city for professional services to the amount of $7,565.

Our readers will be glad to hear that Dr. Jamieson, South Grey's representative in the Ontario Legislature, has recovered from the operation for appendicitis.

Dr. J. A. Macdonald, of Brandon, attended a short time ago the convention of the American Public Health Association. Dr. Macdonald attended in the capacity of a delegate from the Manitoba Provincial Board of Health.

Dr. H. H. Oldright, of St. Catharines, and his father, Dr. William Oldright, of Toronto, spent the Christmas holidays on a short cruise amongst the West India Islands, one of which (St. Kitts) was the birthplace of the last named gentleman.

Dr. Harold L. Hunt, of London, has been appointed by a competitive examination, one of the house surgeons of the New York Polyclinic Hospital for the coming year. Dr. Hunt is a 1902 graduate of the Western Medical College.

The marriage of Dr. F. J. Nicholson, superintendent of the hospital at White Horse, to Miss Huldah Graves, daughter of Howard Graves, of Calgary, and sister-in-law of Mayor Underwood, took place at the Baptist church, Calgary, on Dec 1.

Dr. W. I. Taylor, who obtained the degrees of M. R. C. S. and L. R. C. P.. London, Eng., and was subsequently appointed by the Imperial Government to the medical staff in Lagos, West Africa, was home on furlough recently, visiting his parents, Rev. G. I. Taylor and Mrs. Taylor of 269 Gerrard Street.

OBITUARY.

K. McKENZIE, M.D.

Dr. Kenneth McKenzie, of St. Johns, Nfld., died on the 24th December. He was a graduate of Dalhousie College and Edinburgh.

MRS. DR. C. K. CLARKE.

Mrs. Clarke, wife of Dr. Clark, Medical Superintendent of Rockwood Hospital for the Insane, died on Christmas night.

A. C. McDONNELL.

Dr. A. C. McDonnell, one of the leading physicians of Montreal, died recently in his 74th year. He was a graduate of Toronto University, and was for twenty years on the consulting staff of the Hotel Dieu.

C. W. HOPKINS, M.D.

Dr. C. W. Hopkins, Medical Superintendent, Montreal Maternity Hospital, died in the latter part of December of typhoid fever.

W. S. HARDING.

Dr. W. S. Harding dropped dead 12th December, 1902, about six o'clock in the dining room of the house opposite his residence.

W. B. LINDSAY, M.D.

Dr. W. B. Lindsay, L.R.C.P., London, England, died 11th December, 1902, at Strathroy, from apoplexy. Although death came unexpectedly, deceased had been in poor health for some time.

C. A. McPHAIL, M.D.

Dr. C. A. McPhail, of Summerside, P. E. Island, died suddenly on 3rd December, 1902. He retired about eleven o'clock in his usual health and shortly afterwards was stricken with apoplexy, from which he failed to rally. He was forty-two years of age and leaves a widow and two children.

DENNIS NUNAN, M.D.

Dr. Dennis Nunan, of Guelph, died 12th December, 1902. For a year or more the doctor had been in poor health. At times he was confined to his bed and suffered a great deal of pain. On the 11th a sudden change for the worse took place and the stricken gentleman was removed to the hospital. It was realized, however, that the end was near. He sank into unconsciousness and passed peacefully away. The immediate cause of his death was Bright's disease. He was 47.

A. S. FRASER, M.D.

Anson S. Fraser, M.D., one of Sarnia's most prominent citizens, died 31st December, after a lingering illness of many months. Deceased was born at London, in 1846, and was a graduate of Queen's University, Kingston. He commenced practice in Sarnia in partnership with the late Dr. Bucke, afterwards superintendent of the London Asylum for the Insane. For several years he was examiner in physiology for the Medical Council of Ontario. He was largely instrumental in the establishment of the Sarnia General Hospital in 1896, and was president of the

Hospital Board from its organization until last November, when his illness compelled his resignation. He held appointment as town physician and physician to the Sarnia Indian Reservation, and for many years was surgeon to the 27th Regiment.

A. Y. SCOTT, B.A., M.D., C.M.

Dr. Scott died at his residence, 2 Lamport Avenue, Toronto, on the morning of 3rd January, 1903. He was in his 42nd year, and was born in Stratford, Ont. At one time he was a master in Upper Canada College. Since 1890, he occupied the position of professor of botany at the Ontario College of Pharmacy. He was well and favorably known in military circles. He served with C School in the North-West Rebellion. He was Major of No. 4 Field Hospital Company of the Army Service Corps. Deceased leaves a widow and two sons, one 12 and the other 10 years of age.

It was our good fortnne to have known the late Dr. Scott for many years, being fellow students together at the High School in Clinton, Huron County, Ont. From an acquaintanceship extending over twenty-seven years, we can speak in the highest terms of Dr. Scott's many qualities of head and heart. He lived up to the axiom of Ruskin that "It is better to be nobly remembered than nobly born"; and in doing so, in the words of Emerson, "He builded better than he knew; the conscious stone to beauty grew." What Stedman said of Penn can be said of Dr. Scott: "Worth, courage, honour, these indeed his sustenance and birthright were." His early death, in the full tide of usefulness, reminds us all of the lines of Anna Green :—

"Full many a vessel threads the gates of morn
"With spreading sails and gold upon its prow,
"That ere the eve will bend beneath the storm."

We cannot do better than close our remarks with the eulogy of Byron on the death of Lord Howe :—

"A truer, nobler, trustier heart,
"More loving, or more loyal, never beat
"Within a human breast."

BOOK REVIEWS.

A REFERENCE HANDBOOK.

A Reference Handbook of the Medical Science embracing the entire range of Scientific and Practical Medicine and Allied Science. By Various Writers. A new edition completely Revised and Rewritten. Edited by Albert H. Buck, M.D.; New York City. Vol. II. Illustrated by numerous Chromolithographs and seven hundred and sixty-five half-tone and wood engravings. New York, William Wood Co., 1901.

OVER eighty writers of high standing take part in the preparation of the second volume of the Reference Handbook of the Medical Science. The volume runs from "Blastodern" to "Chloraloximes." We have taken special pains to examine this volume with very great care. The result of this perusal is to convince us that the articles have been prepared with the utmost regard to accuracy of statement, clearness of expression, and arrangement as to length. Each subject is handled by a specialist on that subject. Thus, one can turn to any article and feel confident that he will find the latest and the best teachings in it.

The illustrations are not only numerous, but they are of an altogether superior character. The engravings cover every possible object taken up in the volume, such as instruments, plants, parasites, morbid specimens, diseases, anatomy, histology, etc. The plates are object lessons in art.

The paper is of high quality, the printing clear and the binding substantial. We have no hesitation in recommending the Reference Handbook as one that will give perfect satisfaction.

THE A B C OF PHOTO-MICROGRAPHY.

A Practical Handbook for Beginners. By W. H. Walmsley. 155 Pages, 5x7, with 29 Photo Micrography by The Author. Cloth, $1.25 Net. Tennant and Ward, New York.

THE lack of any American book dealing with this fascinating branch of photographic work, and the great need of an elementary introduction to photo-micrography, has led Mr. W. H. Walmsley to prepare this excellent manual. Mr. Walmsley is a recognized authority in the photo-micrographic world, and has had a more varied and longer experience in the field than most of his co-workers. He deals with his subject in a plain but comprehensive way, and the beginner who will study the A B C should find his difficulties vanish. The illustrations add largely to the practical value of the book and are, in themselves most interesting.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Science. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Vol. IV. December, 1902. Lea Brothers & Co., Philadelphia and New York. 1902. Price $10.00 per annum or $2.50 per volume.

THE contributors to this volume are Drs. W. T. Belfield, J. C. Bloodgood, John Rose Bradford, Albert P. Brubaker, Max Einhorn, Charles Harringtin and E. G. Thornton. The names are sufficient guarantees of the merit of the volume. This volume takes up diseases of the digestive tract and allied organs, (the liver, pancreas and peritoneum), anaesthetics, fractures, dislocations, amputations, surgery of the extremities, orthopoedics, genito-urinary diseases, diseases of the kidneys, physiology, hygiene, and practical therapeutic referendum.

The volume is well illustrated, and, like its predecessors in the series, is handsomely bound and printed. This volume is an excellent summary of medical and surgical progress for the quarter. The entire series constitute a magnificent reference library. We can recommend this series to our readers with the utmost confidence.

THE PRINCIPLES AND PRACTICE OF GYNAECOLOGY, FOR STUDENTS AND PRACTITIONERS.

By E. C. Dudley, A.M., M.D., Professor of Gynaecology, Northwestern University Medical School; Gynaecologist to St. Luke's and Wesley Hospitals; Fellow of the American Gynaecological Association; Corresponding Member of the Societe Obstetricale et Gynecologique de Paris; Fellow of the British Gynaecological Society, Ex-President of the Chicago Gynaecological Society. Third Edition, Revised and Enlarged, with 474 Illustrations, of which 60 are in colors and 22 full-page plates in colors. Lea Brothers & Co., Philadelphia and New York, 1902. Cloth, $5; Leather, $6; Morocco, $6.50 net.

IT is just four years since the first edition of this work appeared. During this period the book has been improved in many ways. It then contained 637 pages, whereas it now contains 760. The illustrations have also increased in numbers.

The main aim of the author is the elucidation of the best methods of treatment. While etiology, pathology, and diagnosis receive such attention as makes clear their importance, the larger share of the space at the author's disposal is given to the question of treatment. It is, therefore, essentially a practical work. It is announced as being designed for students and practitioners. This is no easy task to carry out satisfactorily. The text-book for the student is apt to be rather encumbered with minor detail, whereas that for the practitioner is likely to be

loaded with too many technicalities and operative procedures for the average student. In the present instance, the author has avoided both these difficulties with much skill.

That Dr. Dudley's work has found a place for itself is abundantly proven by the fact that three editions have appeared in a little less than four years. The reasons are the excellence of the illustrations and the clearness of the descriptions of various diseases and operations.

The general division of subjects is into General Principles; Infectious Inflammations and Allied Disorders; Tumors, Tubal Pregnancy, and Malformations; Traumatisms; Displacements of the Uterus and other Pelvic Organs; Disorders of Menstruation and Sterility.

As it would be impossible to do more than refer to a few points the following are singled out for mention. The author prefers catgut to silk for buried sutures, and regards it as perfectly safe when properly prepared. His method is to wind the gut tightly round a glass tube, it is soaked in ether for 12 hours, it is then soaked for 24 hours in a 5 per cent. solution of formaldehyde, the tubes are placed under running water for 24 hours, they are then boiled for twenty minutes in water.

Wounds are closed by subcutaneous continuous suture of catgut. The wound is dusted with nosophen, and a layer of gauze placed over it. The edges of the gauze are fastened with collodion, but this is not applied over the wound. A quantity of absorbent cotton is put on the gauze, and this is covered by another layer of gauze, and the edges fastened by the collodion. The entire dressing is secured by strips of perforated adhesive plaster. This takes the place of the abdominal binder, frequently employed.

On the management of the peritoneal cavity in abdominal operations the author makes some valuable observations. With regard to washing out the peritoneal cavity, he states that pouring the fluid in from a pitcher is not reliable. The fluid should be carried into the remote parts of the abdominal cavity by means of a canula. Normal salt solution is the fluid best adopted for such a flushing of the cavity. With regard to drainage, he contends that it is contra-indicted in all clean operations that have not hitherto been infected. As to septic cases the author remarks that the results in a large number of drained pus-cases and an equal number of like cases not drained uniformly show a strong preponderance of recoveries in the non-drainage series. If, during the operation, pus escapes into the peritoneal cavity it should be removed at once by sponges. If the pus is sterile this is sufficient. Where there is reason to fear that the pus is virulent, the peritoneal cavity should be thoroughly flushed out with normal saline solution, leaving a consider-

able amount of the fluid in the cavity to dilute the pus, and favor its ready absorption and removal by the absorbent channels.

Where drainage must be had recourse to, he lays down the following indications for its employment: 1. General septic peritonitis. 2. The presence of a nidus of infection whence septic matter must continue to be propagated, as by an open intestine, an abscess, a cyst, an infected hæmatocele, a large amount of necrotic tissue. 3. Hæmorrhage which cannot be controlled by suture, ligature, temporary pressure, or hot sponges.

On the treatment of tubal pregnancy the author lays down the following rules: 1. The treatment before rupture or abortion occurs is that the tube and its contents should at once be removed. 2. When rupture has taken place the general rule is to operate at once, as it may be unwise to wait for reaction from the shock and hæmorrhage. 3. If rupture or abortion has occurred, and the patient has recovered from its immediate effects, and gestation has ceased with the death of the fœtus, there may be spontaneous cure, with absorption and disappearance of the products of conception. Under these favorable conditions, especially if there be continuous gradual improvement in the symptoms, one may adopt the plan of watchful expectancy. 4. If gestation has advanced beyond the fourth or fifth month, and the child is living, the removal of the fœtus, together with the placenta and gestation-sac, is practicable in only a small minority of cases, where there is a pedicle to the gestation-sac. In the vast majority of cases, beyond the fourth or fifth month, the operator must be content to incise the sac, remove the fœtus, stitch the sac to the abdominal wound, and leave the placenta, establishing drainage by gauze or tube. In two or three weeks the wound may be opened, and the placenta removed. The general plan, however, is to let the placenta disintegrate and drain away as debris.

It would be impossible to review all the chapters; but will only refer to the author's operation for anteversion and anteflexion of the uterus. The cervix is divided with scissors backward in the median line past the utero-vaginal attachment nearly to the utero-peritoneal fold in the pouch of Douglas. The incision is deepened in the uterine wall next the cervical canal, and a small angle cut out on each side to permit the walls of the wound to fold upon themselves. The cut surface on each side is now folded on itself by a single silkwormgut suture, which passes through the lower and upper ends of the cut surface. This suture is fortified by others. The cut surface is thus folded upon itself in a direction at right angles to the cervical canal. When the anterior lip is too long a considerable portion of the redundant tissue is removed, and

the wound closed by sutures that run across the direction of the cervix, so that when these sutures are tied, the line of the united wound extends from the os upwards along the anterior aspect of the cervix.

The whole work is of a most practical and helpful character. It is particularly valuable as a guide to the best methods of treatment, medical and surgical. We have no words but those of commendation for the present edition of Dr. Dudley's Principles and Practice of Gynaecology.

THE DISEASES OF THE NOSE, THROAT AND EAR.

By Charles Prevost Grayson, A.M., M.D., lecturer on Laryngology and Rhinology in the Medical Department of the University of Pennsylvania. Laryngologist and Otologist to the Philadelphia Hospital. Illustrated with 129 engravings and 8 plates. Colors and monochrome. Lea Bros. & Co., Philadelphia and New York. Cloth, $3.50 net.

NOWADAYS one can scarcely take up a medical journal without finding in it something new either in treatment or in instrumental means to manage the various pathological conditions found in the upper respiratory tract. Many of these articles are written while the procedures are yet in the experimental stage while not a few would never have been written had the authors waited a little to know for themselves more of the measures they advocate. In this volume of 534 pages the author has carefully eliminated things that are too near and do not bear the stamp of experience. The book is quite conservative in its nature and of more value we think because of this. The author insists that these regions should be treated as parts of the entire system and not as structures independent of the rest of the body, thus making his therapeutics something more than an unvarying local routine of sprays, powders and pigments. The intimate association of various changes in the mucous membranes with the digestive and circulatory systems is plainly and fully shown. He asserts that a very large proportion of the affections of the nose and throat that are brought to us for treatment are associated with subacute or chronic gastro-intestinal disturbances and with the autotoxaemic state that proceeds from them. And the specialist who limits his study and practice to the boundaries of some petty gland or cavity limits also his usefullness and discredits his profession. Many practical points are brought out in the chapter on semeiology and therapeutics on the use and abuse of the various appliances ordered for the patient to use. The remarks on the galvano-cautery are particularly apt and very forcibly given. The abuse and mutilation that has been caused by the indiscrinate use of the galvano-cautery is none too plainly set forth. Regarding the frequency of its use he says, " Every practiti-

oner who chose, whether he had any special knowledge of the nose and its important functions or not, provided himself with a cautery battery and considered himself amply equipped to conquer every known nasal malady. Batteries are luxuries, not necessities, and the longer one pursues his work without them the more likely and more able will he be to dispense with them entirely." The author condemns we think unnecessarily those who use solutions of cocaine in operation work in strengths of 10 or 20 per cent. Rather than employ a solution stronger than 6 or 8 per cent. he would use a general anaesthetic. Either he must use general narcosis quite frequently or his patients are particularily adept at controlling their feelings. In connection with acute rhinitis he takes the decided stand that 99 per cent. of such patients have what is called lithaemia and it is from the presence of uric acid in excess that their symptoms appear. Coryzas in those patients are therefore to be regarded as neither more or less than nasal signals of systemic poisoning. Treatment is directed to elimate the poison and he places much more value in an hours sharp exercise than all the quinine, Dover's powder and Turkish baths that were ever prescribed.

Purulent rhinitis in children, the author says, often leads to the atrophic form of catarrh. The pathology of atrophic rhinitis is not sufficiently understood as yet to warrant such a statement. In connection with this form of rhinitis mention should be made that nasopharyngeal adenoids, foreign bodies, and even antral mischief may be the cause. The chapter on hypertrophic rhinitis is the best we think that has appeared in any of the most recent works. The intimate association of this disease with the general health is clearly shown. The connection of all vices tending to keep up the trouble and the use of various cleansing and stimulating remedies is advised before resorting to any cauterizing agent. Iodine, followed if ineffectual, by chromic acid used as a "stimulant" is given preference to the cautery. It is difficult to understand how a bead of chromic acid applied to the mucous membrane of the inferior turbinated body could be anything but a caustic yet the author uses it as a stimulant in one case and later prefers it as a cauterant to the galvano-cautery. In removing posterior turbinal hypertrophies, the author says, with a snare 20 or 30 minutes is not too long a time to allow for this purpose. Without general narcosis it will be a very well trained patient that will submit to such a long sitting. Thoroughness is the key note in the treatment of atrophic rhinitis and after reading this chapter one cannot but have a more hopeful view of this very troublesome disease. The author believes uric acid is in excess in cases of hay fever, and he begins his treatment by measures calculated to eliminate the

toxaemia. During the acute stage he strongly advises the use of a small speck of chromic acid applied to the turbinated body. This pin point application he says is of immense value and as it occasions no loss of tissue may be repeated with advantage at intervals of a few days. One is almost stunned on reading this and were the author not writing on conservative lines we would feel like thinking him a faddist on this point. Specks are of various sizes and we feel sure the author means the most infinitesimal. A nasal lesion the author says is always present though difficult to detect.

In speaking of the recurrence of polypi no mention is made of the probability of accessory sinus disease the cure of which must precede the cure of the polypi. The chapter on affections of the septum is very well written. The author states that *the past decade has witnessed a great excess of nasal surgery. The exercise in the present of a little common sense will do much to restrict it.* He is not carried away by the multitude of instruments used in septal operations prefering to be familiar with a few *useful* ones rather than knowing a little about many.

The chapter on diseases of the accessory sinuses of the nose is entirely too short. In connection with maxillary antral disease he says it is only in exceptional cases that we are compelled to resort to transillumination and perhaps to tapping in order to confirm our suspicions. To this we must take exception If the author can satisfactorily diagnose his cases of antral disease without these means he has reached a point in diagnostic ability which we envy very much. True, in very typical cases the diagnosis may be easy, yet in a large number a *positive* diagnosis is only made by SEEING the pus come out of the natural or artifical opening. He first treats these cases through the natural opening. We think few cases are adapted to this form of treatment. No mention is made of the fact that the maxillary antrum may act as a reservoir for the frontal or ethmoidal sinus, or that ethmoidal suppuration may be kept up by other sinus mischief. The ease with which the author reaches the sphenoidal sinus and irrigates it makes us think his cases have been particularily favorable ones for this performance. The cuts of the various cavities leading into the nose are excellent. Following the removal of adenoids no mention is made of what is of very great importance from a respiratory point of view, viz: teaching the patient how to breathe through the nose. Those who have never had nasal respiration must be taught it. Frequently this is secured by supporting the chin at nights by a bandage or holding the mouth shut and forcing the child to inhale through the nose may be the only means of showing him he can. The best performed adenoid operation may be a failure by disregarding this feature of the after treat-

ment. Intra tracheal medication in disease of the larnyx is very highly spoken of. A more hopeful view is taken of tubercular laryngitis than is usual by writers on this disease. In paralysis of the vocal cord from aneurism of the arch of the aorta no mention is made of the value of x-rays assisting the diagnosis. Diseases of the ear occupy 200 pages while at the end of the book are found a number of formulae with full directions for their use. The book is one we have had great pleasure in reading and one that presents the diseases of the nose, throat and ear in a very attractive and up-to-date manner. The publishers have succeeded in getting up a handsome volume.

SAUNDERS' MEDICAL HAND-ATLASES. ATLAS AND EPITOME OF TRAUMATIC FRACTURES AND DISLOCATIONS.

By Professor Dr. H. Helferich, Professor of Surgery at the Royal University, Greifswald, Prussia. Edited, with additions, by Joseph C. Bloodgood, M. D., Associate in Surgery, Johns Hopkins University, Baltimore. From the fifth revised and enlarged German edition. With 216 colored illustrations on 64 lithographic plates, 190 text-cuts, and 353 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth $3.00 net Toronto: J. A. Carveth & Co.

THIS worthy addition to Saunders' Series of Hand Atlases will be found of inestimable value in facilitating the student's introduction to the important department of fractures and dislocations, and as a ready reference book for the use of physicians in general practice. This department of medicine is one in which, from lack of practical knowledge, much harm can be done, and one which in recent years has obtained great importance. A book, accurately portraying the anatomic relations of the fractured parts, together with the diagnosis and treatment of the conditions, became an absolute necessity. The work before us fully meets all requirements. As complete a view as possible of each case has been presented, thus equipping the physician for the manifold appearances that he will meet with in practice.

The author has brought together in this work a collection of illustrations unrivalled for accuracy and clearness of portrayal of the conditions represented, showing the visible external deformity, the x-ray shadow, the anatomic preparation and the method of treatment. We have no doubt that the book will be received with the favor it demands, filling as it does so admirably, a want long felt. A perusal of this volume convinces one of the great importance of the graphic method of teaching a subject. It is both pleasant and profitable to examine these beautiful plates.

SURGICAL PRINCIPLES AND DISEASES OF THE FACE, MOUTH, AND JAWS.

A text-Book of the Surgical Principles and Surgical Diseases of the Face, Mouth, and Jaws for Dental Students. By H. Horace Grant, A. M., M. D., Professor of Surgery and of Clinical Surgery. Hospital College of Medicine; Professor of Oral Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth $2.50 net. Toronto: J. A. Carveth & Co.

THIS text-book, designed for the student of dentistry, succinctly explains the principles of dental surgery applicable to all operative procedures, and also discusses such surgical lesions as are likely to require diagnosis and perhaps treatment by the dentist.

The arrangement and subject matter covers the needs of the dental student without encumbering him with any details foreign to the course of instruction usually followed in dental colleges at the present time. The work includes, moreover, such emergency procedures as not alone the dentist and physician, but also the laymen, may be called upon to perform. These, like the other subjects in the book, have been described in clear, concise language, admitting of no unequivocalness. Whenever necessary, for the better elucidation of the text, well selected illustrations have been employed. For the dental student the work will be found an invaluable text-book; and indeed, the medical beginner, also, will find its perusal of more than passing benefit.

The paper, type, and binding are a credit to the well known publisher. The work should obtain a wide sale.

A MANUAL OF BACTERIOLOGY CLINICAL AND APPLIED WITH AN APPENDIX ON BACTERIAL REMEDIES &c.

By Richard T. Hewlett, M. D., M. R. C. P., D. P. H., (Lond). Professor of General Pathology and Bacteriology, King's College London; Physician to the Seamen's Hospital, Greenwich; Lecturer on Bacteriology, London School of Tropical Medicine; formerly Bacteriologist to the Jenner Institute of Preventive Medicine, London. Second Editor. London, J. and A. Churchill, 7 Great Marlborough Street. Post 8 vo, price 12s and 6d. 1902.

THE first edition of this work appeared in 1898. Since that date, the science of bacteriology has made much progress; and we note with pleasure that the author has kept his book well up to date on all points. The unicellular organisms, known as bacteria are immortal, for the protoplasm of the parent cell divides into two daughter organisms and so on. It is on this quality that Weisman basis his theory of heredity. With-

out the presence of germs, there could be no decay, or putrefaction, and the dead remains of animal and vegetable life would encumber the earth, which would become sterile, for want of the organic matter originally derived from it. Commercially micro-organisms are of the utmost importance, as without them there would be no fermentation and the wine, beer, and indigo industries, the ripening of cheese and tobacco, and many like processes would be non-existent. In a financial aspect they play an important rôle, as many diseases of man, animals, and vegetables, are due to them. It has now been settled that without micro- organisms there can be no putrefaction.

A large portion of the work is taken up with the discussion of the various organisms which cause disease, and of the diseases that are regarded as of bacterial origin, though no organisms have as yet been discovered. The author closes the work with a very careful and instructive chapter on the bacterial remedies, the anti-toxins and the anti-sera, such as those for diphtheria, tuberculosis. glanders, cholera, typhoid fever, Coley's fluid, and vaccination.

The book is excellently got up. The binding, paper, press work, and illustrations are all that could be desired.

No practitioner can afford to be without a work on bacteriology, and Dr. Hewlett's is all that could be desired. We can very confidently recommend the book.

THE NURSE'S GUIDE FOR THE OPERATING ROOM.

By Nicholas Senn, M.D., Ph. D., L.L.D., C.M. Professor of Surgery, Rush Medical College, etc., etc. Published under the Direction of the Sisters of Charity, St. Joseph's Hospital, 360 Garfield Ave., Chicago. W. T. Keener & Co., Chicago, Ill. 97 Wabash Ave., Price, $1.50.

THIS book is got up in a very attractive manner. The press-work, the illustrations, the paper, and the binding are of the very best in the book-making line. The information in the book is of the most useful kind. Full directions are laid down on the preparation of operating rooms, instruments, supplies, and sterilization. A complete inventory of the instruments, required for the principal operations, is given. A glance through the book convinces one that it ought to be in the hands of all trained nurses, especially surgical nurses. It might be read to advantage by many medical men who propose to do surgical work. It should be in the library of every training school for nurses.

MISCELLANEOUS.

"THE DOCUMENTS IN THE CASE."

WE hope that every physician who receives the somewhat graphic description of the case of Mrs. S., and notices the marked and rapid improvement in her condition as evidenced by the differential blood counts, may apply to the Palisade Manufacturing Co. for information in regard to the treatment which proved so distinctly successful in this marked case of chloro-anemia. Those who have not as yet received this unique portfolio of legal-looking documents should apply for copy at once before the supply is exhausted.

PRACTICAL IDEAS ON THE TREATMENT OF PNEUMONIA, PERICARDITIS AND TUBERCULAR PLEURISY.

EDMOND J. Melville, M.D., C.M., Bakersfield, Vt., in the *Southern Practitioner*, writes as follows: About a year and a half ago my attention was called to a new form of applying moist heat by means of a preparation called Antiphlogistine. I had discarded the poultice years before, not, however, without being aware of its therapeutical value in certain affections. Though skeptical I was desirous of finding something possessing the virtues of the poultice, minus its vices, and made a trial of Antiphlogistine in a series of cases with favorable results. After an experience of eighteen months with the product I have come to the following conclusions:

1. When a coating is applied over an inflamed area, or the skin area covering an inflammation in an internal organ, an afflux of blood takes place, thereby diminishing the pressure and arterial tension in the internal organ. 2. The tissues are relaxed and the removal of the pressure from the sensory nerve filaments relieves pain at the periphery and very often the impression is conveyed to internal organs far removed and having no anatomical connection with the part where the Antiphlogistine is applied. 3. Again, I have found that in tense, indurated swellings, one or repeated warm applications of Antiphlogistine will soften the tissues and relieve the stasis, consequently tension of the inflamed part is lessened and resolution favored or the inflammation aborted. Even in cases where the stage of suppuration has been reached, as in suppurating boils and felons, I have seen the migration and multiplication of white blood corpsules promoted and extrusion of the purulent contents hastened.

Case 1.—Fibrinous Pleurisy. Miss C. N., aged 46 ; feeble health always. Family history of rheumatism and tuberculosis. Called January 8, 1900. Patient suffering from severe chill, lancinating pain in region of right nipple extending over a surface as large as the hand. Dry cough, scant expectoration streaked with blood, dry rales, temp. following chill, 103 deg. F., pulse 120, resp. 50. Patient propped up in chair to relieve tension on pleura. Bronchial breathing; friction rub present; no exudate discernible. Diagnosis acute fibrinous pleurisy. Gave epsom salts, one ounce, to insure free purgation. Applied warm Antiphlogistine over the entire thoratic walls front and back. At 10 p.m. I found that the patient had had a copious evacuation. Removed Antiphlogistine and applied a fresh coat. Pain and dyspnœa were greatly relieved, temp. 101, pulse 95, and patient was able to resume the recumbent position. January 9th (9 a.m.), patient was free from pain, temp. 99, pulse 84, resp. 22. She was very comfortable. No untoward pleural symptoms. Applied Antiphlogistine daily for three days when recovery had so far progressed that further attendance was deemed unnecessary.

Case 2.—Pneumonia and Pericarditis. H. D., aged 60, hotel keeper, heavy eater and drinker. Contracted a well defined attack of unilateral pneumonia of left lower lobe, May 5th, 1900, severe chill, lasted over an hour. Temp. 105, pulse 104, resp. 38; tongue coated, foul-smelling breath, consolidation over posterior portion of left lobe. May 7th, cough and rusty sputum; other symptoms practically unchanged. Ordered rest, liquid diet, and in short, gave usual treatment for pneumonia. May 8th (5 a.m.), patient had another severe chill and pericarditis with effusion supervened with severe pain in left axillary region. Temp. 105, pulse 140, weak and intermittent. Dislocation of heart beat to right of sternum. Dyspnœa out of all proportion to extent of effusion. Patient delirious and tossing about in great mental and physical distress. Enveloped area, well over and around the site of pain and effusion with a coating an inch thick of warm Antiphlogistine. Placed patient on as dry diet as possible and gave a capsule containing strych. 1-20, glonoin 1-50, pilocarpine 1-10, every three hours. Changed Antiphlogistine every 8 hours for the first 48 hours, then every 24 hours for three days following. Watched symptoms closely, and under this line of treatment patient showed immediate and continuous improvement. May 10th, the symptoms had become so favourable that I considered the danger over. Pain was pretty well under control before second application began to dry. Pulse beats became slower, less intermittent and increased in volume. Temp. dropped 3 deg. in as many

days and the effusion began to disappear. Lastly and most marked of all, the dyspnœa was relieved. The epsom salts produced copious liquid discharges, the glonoin and pilocarpine produced free diuresis and diaphoresis and thus aided materially in absorbing the liquid from the lymph spaces in the pericardium. May 12th (11 a.m.), patient sat up in bed. Temp., pulse, and resp. were normal. Lungs and heart acting well. In three weeks patient was practically as well as ever.

Case 3.—Tubercular Pleurisy. Mr. R. S., aged 65. Contracted tuberculosis in spring of 1900. Saw him in June of 1900, when he was suffering with an agonizing pain in right axillary region from an aggravating pleurisy of six weeks' duration. Opiates had been given without avail and blistering, cupping and strapping gave only temporary relief. Excessive doses of morphine only partially relieved pain. Applied coating of warm Antiphlogistine to affected part and next day found patient had rested well, notwithstanding the fact no opiate had been given. Each application was peeled off at the end of 24 hours and a fresh coat applied.

The disease steadily progressed, however, and the patient succumbed in October to general tuberculosis. I report this case merely to show that Antiphlogistine's remedial value is of much consequence, even in hopeless cases, where our patients' dying hours may be soothed without blunting their reasoning faculties.

While I would not wish to say, as yet, that Antiphlogistine used often and early will abort pneumonia, pleuritis and pericarditis, I can safely say that it is the most valuable agent I have yet used to shorten these diseases.

ANAESTHESIA OF THE DRUM MEMBER.

Dr. G. B. McAuliffe, in the November, 1902, number of the *New England Medical Monthly*, recommends hydrozone for cleaning the ear and drum prior to the application of the cocain. The conditions favoring this application of cocain are: (1) The removal of foreign substances and loose scales from the drum membrane and canal. (2) Dehydration of the outer layers of the membrane—a dessication which causes molecular contraction and interstices through which the anæsthetic can reach the deeper parts and nerve terminations. (3) The induction of endosmosis. The first condition is met by the use of hydrozone which is stronger and better than any other kind of H_2O_2 preparation in softening and boiling out the debris of the canal and in lessening the resistance of the dermal layer. The hydrozone is subsequently mopped out by

cotton applicators or syringed from the canal. The second and third conditions are met by the use of alcohol and aniline oil. The latter is absorbed more slowly and its effects last longer than the former. The solutions used are 5 to 20% of cocaine in equal parts of absolute alcohol and aniline oil. Anæsthesia is gained in 10-15 minutes. The disadvantage of the solution is that the aniline oil is toxic and obscures the field. The external canal is generally filled to ensure osmotic instability and certainty of penetration. The toxicity can in a great measure be prevented by not filling the canal but by applying to the drum membrane a small wad saturated with the solution and by making only one application. The obscuration of the field by the dark oil will then be less and the solution can be more easily mopped away.

LAXATIVE ANTIKAMNIA AND QUININE TABLETS.

APPRECIATING the importance of the command, "Keep the Bowels Open," The Antikamnia Chemical Company offers Laxative Antikamnia & Quinine Tablets,the laxative dose of which is one or two tablets, every two or three hours as indicated. When a cathartic is desired, administer the Laxative & Quinine Tablets as directed and follow with a saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

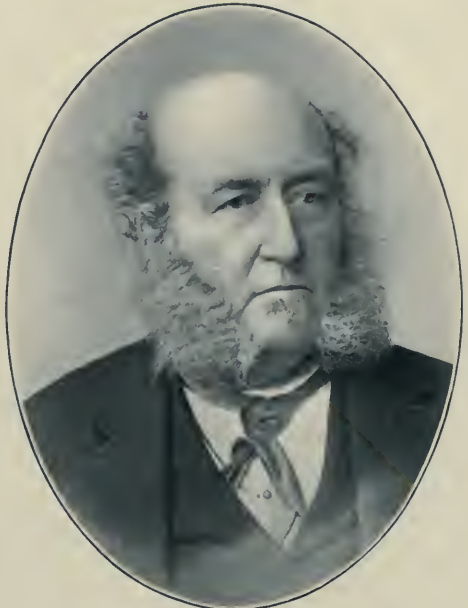
GLYCO-HEROIN.

GLYCO-HEROIN(Smith) is a glycerine solution of heroin. It contains one sixteenth grain heroin to each teaspoonful, along with white pine bark, ammonium hypophospites, balsam tolu, etc. The dose is one teaspoonful every two hours, or longer intervals, for adults. It is a valuable expectorant.

LITHIA TABLETS.

The salts of lithia have been highly esteemed by many in conditions of a gouty, lithaemic, and rheumatic character, and in cases of imperfect metabolism, where the kidneys suffer as a consequence. These waste products often give rise to serious renal trouble. The lithia water tablets prepared by Wm. R. Warner & Co., are an excellent and convenient form for administration.

THE LATE ANSON S. FRASER, M D.,
OF SARNIA, ONT.



THE LATE HENRY W. DAY, M.D.,
OF BELLEVILLE, ONT

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EXPERT MEDICAL TESTIMONY.

By His Honor the late Jos. E. McDougall, Senior Judge Co., Court Co. of York *.

YOUR worthy President, about ten days ago, had the temerity to enter the Court House, without a subpoena, came to my room and made a request to me that I would be good enough to say a few words to the Association when it assembled, upon the subject of medical testimony, or, perhaps, more particularly, on an important branch of it—expert testimony. I pointed out to your President that my time was very much taken up at this particular period of the year, and that I feared very much I would not be able to consent, but like very many other persistent men he would not take "No" for an answer, and later in the week he saw me again and persuaded me to make the effort.

I was tempted, also, to refuse upon another ground, and that was, that I have some fairly strong views on the subject of medical testimony, and I did not know but that some of the matters I might care to discuss here would possibly not be as palatable to my audience as they might be to the laity, or to lawyers. (Hear, hear). But on reflection, as one of those concerned in the administration of justice, and as one who has much interest in improving all our methods, it struck me it would be a golden opportunity to frankly and candidly use the scalpel a little, if advisable, in dealing with this important subject.

Now, of course, there are one or two elementary questions which it is necessary, perhaps, to briefly glance at to place ourselves, as it were in apposition with our subject.

In the first place, there are two kinds of evidence, that is, the evidence as to facts, which come under the observation of the witness, under the observation of a doctor just as much as under the observation of the layman; but evidence as to facts is not expert testimony. Then, there is evidence relating to the interpretation of facts founded on the knowledge possessed by the witness of the special subject, matter of interpretation, of inference, of conclusions based upon special knowledge, this is commonly called opinion evidence, or, in other words expert testimony.

* An address delivered at Toronto, on 4th June, 1902, before the Ontario Medical Association. *Canadian Law Review.*

A medical man, as an ordinary witness, may be asked as to the condition he found matters in, when called as a witness, that would be the common question, but when he is asked, describing this condition: "Doctor, is that condition dangerous to life?" then he is called upon to express an opinion.

Now, evidence must be relevant, and there I quarrel occasionally with the doctors, because they sometimes travel out of the regular track,—they go abroad. It must relate to the facts in controversy; it must tend to prove, or disaprove, or explain them, and it must meet the requirements of the law both as to its form and as to its authenticity.

As to its form, there are several forms in which such evidence may be given. It may be given in the shape of an opinion, or it may be given in the shape of a statement, setting forth the taking of a dying declaration. The latter, however, has to follow the forms of law and, of course, to be sanctioned by an oath.

The question of the admissibility of testimony is for the Judge, the question of the weight to be attached to the evidence is for the jury.

There is another sub-division of evidence, somewhat cognate. Evidence is either direct or indirect. Direct or positive evidence is not aided by any presumption or inference, while indirect evidence may be proof of collateral facts believed to have a connection with the principal fact to be proved. Or again, it may come into the region of expert testimony, that is an inference reasoned out from the knowledge and experience of the witness who details it—cause and effect—to show that the ultimate fact which is sought. either exists or does not exist.

Now, wise as non-professional people may be, they are not qualified in a great many cases to draw or make inferences, and that is why, on the ground rather of necessity than on any other legal ground, so-called opinion evidence is tolerated as part of the process of arriving at a conclusion. The ordinary conclusions have usually to be arrived at from definite facts, but owing to the variety and multiple forms of our civilization, the importance of the arts and sciences, the mysteries which are investigated by the medical profession, and in some of the arts and sciences such knowledge being limited to a small class, it has become necessary, in many investigations, in order to get at the root of the matter, to permit or allow, not evidence of the facts, but skilled persons to tell us what the proper inferences should be from the given facts, and in that way has grown up this system of calling experts in many cases to assist the court in arriving at a proper and just conclusion.

A very familiar instance will illustrate: Take a case (I think it is cited in one of your text books on jurisprudence); suppose that a child

is badly burnt, and in order to soothe its pain, soothe its agony, ten or twelve drops of laudanum are administered (I am not measuring the dose, as I don't know much about it), and the child dies A common jury could not tell whether it died from the burns or from the drug. A doctor probably could. He could describe the nature and extent of the burns. They might be so superficial as to displace the idea that death had resulted from that cause, or they might be so serious that he could at once say, "Although it was a heavy dose of laudanum, the child received sufficient injury from the burns to cause death." But a common jury or a common judge could not find out that fact with equal certainty or perhaps arrive at a just conclusion, and that is where the medical man is called in to help the court and the jury.

Now, expert testimony, (and here is one of the difficulties of the position, one of the causes of a great deal of harsh criticism), can only be met by expert testimony, or other opinions supporting or confuting the theory set up by the first line of experts, and then we have the melancholy spectacle, sometimes, of three or four men, of reputation, of good professional standing, and presumed acquirements, going into the box before twelve very common men, and a judge and scoffing lawyers, and combating each others opinions, (under oath bear in mind), before the jury. This is lamentable, because both views cannot be correct. If they are matters of opinion, there may be a difference of opinion, but in the great majority of cases there is a tendency to exaggerate on both sides to such an extent that it is palpable even to those who do not know much about it; hence a great deal of the criticism and harsh remarks about medical experts.

A physician, if he is called as an expert and his opinion is going to be worth anything in assisting any court in arriving at proper conclusions upon the facts testified to, should certainly hear the witnesses who detail those facts, in order that he can express a safe opinion. Facts which would escape the lawyer, which would escape the layman, are necessary to be brought out to give the medical man proper data to arrive at a just and proper conclusion, and therefore I say that no physician, except under very extraordinary circumstances, in my judgment should go into the witness-box and express an opinion upon facts which have transpired in a case without having heard the witnesses give their evidence of those facts. I have known physicians who had heard nothing of the case, perhaps, until it was half tried, and the plaintiff and the defendant had been cross-examined; the statements of the witnesses taken in short-hand the only material placed before the physician being this transcript of testimony put in his hand a few hours only before he

was called to give expert testimony in such action. Such data are not reliable. The witnesses should be seen and heard. The higher courts, when reviewing the findings of a trial judge, even with the transcript before them, will generally decline to interfere with the trial judge's findings of fact alleging that the latter saw the witnesses. observed their demeanor in the witness box, and was, therefore, in better position to determine the questions of fact, and though the finding is at variance with the apparent facts disclosed by the transcript, the court will generally refuse to disturb the verdict. It is extremely difficult to get a higher court to upset a verdict, based upon a finding of fact, unless the finding is manifestly wrong or clearly irreconcilable with the sworm testimony.

Now, doctors sometimes have a hard time in the box and why? In the first place, if one side is going to call a doctor, the opposite side must have a doctor, too. Then the lawyers, who do not possess any too much knowledge on the questions that are to be debated, have got to be coached. You can understand that a man is very superficially prepared who merely scans a few medical books furnished by the doctor, and yet he is coached quite enough to bother a witness, and he puts, as a consesequence, many questions which are very defective in their clearness and difficult, if not impossible, to answer, and we find the medical witness becoming interested in the case to outwit counsel. This attitude shows advocacy, or a partizan spirit, whereas the proper aim of all testimony should be to deal with the facts in a fair, candid and impartial manner, and without any suggestion of an interested motive on the part of the witness.

Take a very common case, the case of an ordinary witness going into the box to meet evidence as to occurrence of certain facts ; if from the moment he is put in the box he shows a strong desire to put the facts most favorably for the side that calls him, such an attitude at once destroys his credit with the jury. His adjectives, his little exaggerations, his eagerness to anticipate the question, all indicate a bias and a desire to serve the interests of the man on whose behalf he is called. Juries quickly notice such indications, and a common witness who shows any desire to give his evidence with a view to helping the man who calls him as a witness, is at once discredited by the jury. A witness may be honest in his intention, but his eagerness to tell favourable facts, and to conceal little matters which might modify them or affect their importance, shows a bias. If the jury observe this, they say, "That man is a biased witness. His statements must be viewed with suspicion."

Now, doctors sometimes manifest the same spirit. They show too deep an interest in the side that calls them, in giving their testimony.

We have all seen such cases. There are cases on record in the books in which judges have been compelled to tell the jury, "Well, gentlemen, you have heard the expert testimony given by learned gentlemen on both sides of this case. Their opinions appear to be irreconcilable, they differ so widely that I cannot assist you in saying which you should accept. You are not bound to give any weight to opinion evidence at all, unless it commends itself to your judgment. You had better discard it and use your common sense and try and dispose of the case on the facts." It is an unfortunate position for a learned profession to merit sometimes such a direction.

Then we have those wondrous hypothetical questions, the unfortunate doctor is addressed: "Now, listen to me, doctor," (a long array of facts are narrated), ending with, "If this statement is correct, what would be the result?" The opposite counsel objects—discussion follows—and ends frequently with the weak suggestion, "Well, we will have the doctors opinion any way to see what it is worth." The poor man is tossed from pillar to post, he tries sometimes to hedge a little, and then the answer which comes aids no one and only further mystifies the jury.

Then we have the doctors who are perhaps a little eager in usurping the functions of the jury. They will blurt out an answer which is no part of their function or duty. Take a will case, where the issue to be determined is that of testamentary capacity. The question whether a man possesses testamentary capacity or not is for the jury, not for the witness; the witness can properly describe actions and peculiarities, and can express his opinion whether such an action indicated an unbalanced mind, or mental disturbance, but he cannot properly express in the witness box the opinion that the person of whom the facts are stated lacked testamentary capacity. That, of course, as I said, is a question for the jury. Doctors may be asked whether pregnancy exists, the duration or stage at which the condition was. He may be asked the nature of disease, he may be questioned as to whether it was a chronic condition or the reverse, he may be asked the cause of death, and when death probably occurred, whether specified things would produce the injury, the nature and effect of medicines, mode of treatment, probability of recovery, whether the injuries are permanent or temporary. These are all matters for his judgment and opinion, and such opinions honestly and fairly expressed are of great assistance to the court and jury.

He is there, also, to explain medical terms, the use of surgical instruments.

Now, experts, as it has been said, are not in very great credit with jurymen or even lawyers. I suppose specialists breed theories, and theories breed dogmas, and sometimes, when a specialist is called he will en-

deavor to air his peculiar views if there is the slightest opening afforded him in the case.

Lord Campbell says hardly any weight is to be placed on the testimony of what are called "scientific witnesses." Such witnesses come with a bias in their minds to support the cause they are embarked on.

Different doctors, of course, with apparently equal confidence, and equal dogmatism, express contrary opinions, upon the same condition of things. When such contradictions occur, is it a wonder that judges are sometimes constrained to make a few strong remarks on the subject, and is it surprising that they should tell the jury, "Gentlemen, I cannot help you out in this. I cannot determine which of these men is the more reputable or the more reliable. The confusion and conflict in their testimony and opinions is so great, perhaps, you had better pay no attention to either ?"

Is there any explanation of this condition of affairs apart from the fallibility of human nature, any root cause, if I may so express it ? I think there is. I think it is largely due to the method in which expert witnesses are secured.

In the first place, the party calling the expert makes sure that his expert's views are favourable to his contention before he calls him (Applause.) I am almost tempted to tell a little story here. On one occasion in London England, a solicitor was consulted with reference to a case of an alleged infringement of a patent. The solicitor like the layman in medical matters, did not know much about mechanics (it was a mechanical patent), and he heard the man's story and said : "That is a question for skilled or expert witnesses to determine, and you had better go about London, interview mechanical engineers and others, and see as to what their opinion is, and if you can get intelligent men to adopt your view, and agree with you that this invention is a novelty and therefore, not an infringement on the other man's patent, you will probably win your suit." Well the trial came off. Seven or eight experts were called by the plaintiff, reputable, skilled men, and they all declared that the question was not worth discussing, any tyro in mechanics would see that the machine in dispute was a mere copy of the other, and was, therefore. clearly an infringement. The defence was called upon ; four or five experts went into the box and stood a pretty good examination, but gave their reasons for concluding that the machine complained of was a novelty and could be properly differentiated from the machine alleged to have been infringed upon. The weight of the testimony, however, was in favor of the plaintiff, so there was a judgment for the plaintiff. When the defendant and his lawyer went out, the defendant commenced to scold the solicitor, and said : "I thought you told me you could win this

case." "Yes," the solicitor answered, "but you didn't furnish me with the testimony." The client replied: "Why, I was all over London and saw about sixty experts, but these we called were the only fellows I could get who would say my machine was not an infringement."

So you see, gentlemen, the difficulty is in the system. The man who calls the expert, first finds out in advance what the expert's opinion is, and if it is in his favor he will put him in the box. He pays him usually a liberal fee. If it is unfavorable he passes on to interview another doctor with more enlighted views.

Now, what is the mental attitude of a medical man, a stranger to the quarrel between the litigants, called upon by a man who apparently has a good cause? The visitor reports that he has found other medical witnesses who will support his contentions in the cause. Is there not a natural tendency or bias on the part of such a witness employed in such a way to hope that the man who employs him (I was going to say hires him), may win his case?

If that be the case, what is the tendency of such a system? In the first place, I maintain (in agreement with several writers whom I have consulted), that such a method of employing your witness tends to corrupt the witness. Bear in mind, I do not mean by that, in a strict sense, that a deliberate intent is formed in the mind of the witness to be dishonest, but he is employed by the litigant to do the best he can for him and this knowledge has its weight with the witness so retained. If the medical witness starts his investigation into facts, it is very curious, but it is sad, he begins with the lively hope that the facts may support favorable inferences. Is it any wonder that he should seize with a good deal of eagerness upon facts which have such tendency, and look rather coldly and with a critical eye upon any facts which point the other way. In thinking it out he is apt to be much impressed with facts which tell in favor of the view of his client, and very critical as to the facts which point the other way. It is difficult to imagine that he should finally reach a conclusion in harmony with the spirit that has controlled the investigation, and, as another writer puts it, in consonance with his client's desire?

Now this sort of influence, I do not mean to say is open and palpable. It is an insidious influence. Can we suggest no method of getting rid of it?

That question is not a new one. It has been discussed in books by lawyers and eminent doctors, many of the latter being oppressed with the contumely which has been cast upon them as expert witnesses, and they have frequently expressed the opinion that a man has got to be

mentally very honest who can resist the working out of a result induced by the method under which the evidence is obtained.

One class of cases I may point out to you where these results are perhaps more apparent than in some others. Take the case of the ordinary railway surgeon. We will say he is paid a good salary. Now, what are his interests? His interest, in the first place, excites the feeling, "I don't want to see my railway company saddled with a heavy bill of damages." He will have a sort of pardonable pride along this line. "I will have to go into this case pretty carefully, because I want to justify the railway company in selecting me as their medical adviser." Then his long experience may justify him in saying: "A large number of these claims are dishonest; the chances are this is one of the same kind. Perhaps there are a few honest claims, but when they are honest generally the claim for damages is excessive," and so the process goes on and he begins his examination into the facts; he works along the line thus indicated; he wishes to justify his retainer; he is impressed with the idea that the claim is exaggerated, if it is genuine; there are a good many claims which are fraudulent, and the question is how far, consciously or not, his mental attitude may influence his conclusions. He may be honest in his conclusions. The retainer, however, is too often paid and received in the literal sense of the term, as a sum paid to retain the knowledge, skill and reputation of the so-called expert witness in the sole interest of the party who pays the fee. It would hardly be natural to expect such a witness to lead the jury to correct and impartial conclusions between the contested issues. Would not his position rather tend to cause him to develop, fortify, defend and prove a theory, which, if accepted, would enable his employers to escape liability?

Gentlemen, I find my time is getting short. Take the ordinary course of a trial. An expert is called and gives an opinion and his reason. The counsel, superficially prepared, as I said before, by some smart lawyer or doctor, puts the witness through a cross examination. Is it to learn the truth? Far from it. It is to demonstrate that the opinions expressed are wrong, and the reasons unsound; or that the witness is ignorant or dishonest, and his opinions or conclusions, to use a mild term, ridiculous.

Then the expert on the other side is called. He expresses quite as strong contrary opinion, gives grave reasons for his opinion, and the opposing counsel gets up to question him, to endeavor to show that this witness is as dishonest as the other one. We will assume both the doctors are honest in expressing opposing views, but is it a dignified exhibition in the witness box? Is evidence given under such conditions a help either to the court or jury to a conclusion?

Now, what is the remedy? According to my view, the expert's true position should be that of an assistant or adviser to the court. (Applause.) We have an illustration in another branch of law. If you ever attended any of the trials in the Admiralty Courts in England, you would notice that in technical nautical matters the Court is assisted by two skilled nautical assessors, or advisors. The Court is not bound to adopt their opinion. When a question of seamanship comes up, whether the right manoeuvre was made, the Court leans over to the stout old captain on his right (who is supposed to be one of the salt of the earth), and says: "Captain was that a right move to make under those conditions?" "No, my Lord, that was injudicious." Then he turns to the old salt at his left, "What do you say?" "I think it was injudicious; I think it led to the disaster." The judge thus learns from skilled men the force and effect of the particular manoeuvre, and naturally is aided to a proper conclusion. Of course, we cannot put a doctor relatively in the same position. I am afraid the court would suffer if they had a doctor sitting on each side (laughter), but we can perhaps devise an approximate condition, or establish a modified method for obtaining skilled advice and assistance from your profession.

My idea is this: I think the Court itself, the judge or possibly the State (though with the latter politics might interfere), should select the medical experts, if a dispute arose which called for the opinions of medical experts. A fund should be provided in some form. A fee could be allowed and taxed in the cause, against the unsuccessful parties, and out of this fund the court could direct that a liberal fee be paid the doctors whose opinions were sought. The expert selected in such a manner could not be said to have any interest in the issue of the case, nor would his reward depend upon the nature and character of the evidence given by him.

So much has the Local Legislature been impressed in connection with the subject of expert testimony and its abuses, that a recent amendment of the Evidence Act has been made with the object of restricting the number of experts to be called, and three experts only are now allowed to be called by either party to a cause, except with the leave of the Court. If a party desirous of calling experts thinks that three will not be sufficient, he has to apply to the Court for leave to call, say, five instead of three, but such application must be made before the other side tenders any evidence. He has to apply to the Court in advance and before the trial to be permitted to call more than three experts.

A learned gentleman, I think he was a little more free-spoken than I am, was asked whether there was as much perjury in the witness box

as people believed was constantly occurring in courts of justice. He said: "My opinion of witnesses is that a large proportion of them should be divided into three classes—liars, d——d liars and experts." (Laughter.)

I want to say one word on the matter of giving testimony, and I am done. Do try, gentlemen, in giving your evidence in courts of justice, to use plain language. If there is one thing more discouraging to the mentality of the jury or judge than another it is what I call "medical jargon." Don't exaggerate; if you are called by a plaintiff who is perhaps claiming damages for an injury, don't speak of his wound as being a "frightful" one; don't speaking of bleeding as an "enormous" hemmorhage. Say the wound was two inches long; he lost five or six ounces of blood; it is much more satisfactory to everybody. Avoid these alarming adjectives. The best sample of a witness that ever comes to my court is a child, twelve or fourteen years of age. They are simple, childish, not expecting traps, and you cannot shake them in their account of the main facts of the case, and usually carry conviction as to the truthfulness of their testimony.

Do not use mysterious terms and high-sounding language. There may arise a suspicion in the mind of the court that you are trying to cover up some weak spot in your own equipment, or if not that, you are afraid, if you would express your thoughts in popular language you might disturb some theory you are endeavoring to build up. Sacrifice elegance and even some consistency in the desire to be intelligible.

I wish you to consider this deliverance a mere talk. I have a few brief notes only. I came in the earnest hope that any few remarks I might make would explain to you how some of the impressions have arisen, which are so frequently ventilated when discussing the subject of expert testimony. It has been open to a great deal of criticism, some of it just and some of it unjust, but I think the root cause is largely a faulty method or system, and to devise a remedy I would like to see the medical profession join to procure legislation on the subject, so that a noble profession should not continue to be exposed to the rude gibes of the bar and public when called upon to give their testimony in our courts of justice. (Applause.)

A hearty vote of thanks to Judge McDougall for his address was moved by Dr. I. H. Cameron and seconded by Dr. Harrison, and carried unanimously.

SOME FURTHER RESULTS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

J. H. ELLIOTT, M.D., Physician-in-Charge, Muskoka Cottage Sanatorium.

AT the meeting of this Association in Toronto three years ago I presented the results of two years work in the sanatorium treatment of pulmonary tuberculosis. Since that time the appreciation of the merits of sanatorium treatment of this disease has rapidly increased, so that a presentation of the results of the past three years in the Muskoka Cottage Sanatorium may be of some interest to the profession.

I want to assure the members of this association of the great value of this method of treatment, and to show that not only a return to health is to be expected in a large proportion of the early cases, but that by hygienic living after returning home the gain made is permanent where the patient has remained under treatment a sufficient length of time.

The term sanatorium treatment includes broadly those measures now adopted by all sanatoria devoted to the treatment of pulmonary tuberculosis; (1) constant life in the open air, (2) general hygienic measures, (3) an abundance of nutritious food, with rest or exercise dependent entirely upon the condition of the patient. Success will vary with the ability of the physician to plan a proper daily programme for each patient, and the co-operation of the patient in following his instructions, and this will be the basis of success rather than climatic considerations or the equipment of the institution, though these play no unimportant part in the work. Each case must be a study in itself, and in absence of any specific medication for the disease the therapeutic measures must be largely symptomatic, the one object being to so improve the nutrition of the patient, that he is able to resist and overcome the effects of the invasion of the tubercle bacillus and its toxins both in the diseased area and the organism in general.

A very important factor is a cheerful mind Everything about the patient must be planned to bring this about, and he must himself be impressed with the necessity of cultivating it. I have often heard it said by a patient when advised to go to a sanatorium, "why can I not be treated at home, I do not want to go where there are so many sick people," and very often the physician will give way to the patient, fearing himself the ill effect of such surroundings. Those of you who have visited a sanatorium need not be told how erroneous is this view, and how little depression is present amongst the merry, happy people who jocularly refer to themselves as "lungers;" you know what brightness and cheer there is about the place. Though it is impossible, however much one may try, to limit the admissions to purely incipient cases,

*Read before the Canadian Medical Association, Montreal, 17th September, 1902.

patients in the very advanced stages are not admitted, and any admissions of advanced diseases are limited to those where the constitution still shows some resisting power, and the disease not advancing rapidly. When the patient does reach the sanatorium he is surprised to find so many healthy looking people, and soon realizes that he is at once recognized as a new patient by his pale face which has not yet been bronzed by life in the open air. Any depression which may appear in a patient is not from seeing other patients about him, but is always traceable to other influences, such as worries about affairs at home, the father or mother troubling about the family left behind, or the consideration of the financial burden of six months to a year away from home with no earning capacity.

On the other hand everything about the sanatorium itself is cleanly, bright and cheerful, and what can be more encouraging to anyone afflicted with tuberculosis, which he has been taught to look upon through his life as inevitably fatal, than to see 20 per cent. or 25 per cent. of all those about him returning home apparently cured, 25 per cent. to 35 per cent. more in perfect general health, though perhaps not quite free from cough, and another 25 per cent. markedly improved—i. e. of all cases treated, and many leaving before they should do so he has a picture of 75 per cent. with marked improvement, another 15 per cent. stationary, and in only 10 any progress of the disease. When he sees this for himself he cannot but be encouraged. There is with many at first a feeling of strangeness and perhaps homesickness, but this is soon replaced by an intense interest in the new surroundings and new method of life, and immediate improvement satisfies him that he has made a wise decision in leaving home.

It is unfortunate that for the proper classification of cases there has been no uniform standard of terms adopted by those working in this department of medicine. At the meeting of the American Climatological Association in 1901 a committee was appointed to arrange a satisfactory classification, and a definition of terms employed. They were, I believe, hopelessly divided amongst themselves, and we must go on with our own arbitrary divisions until the matter is settled. In my own work I have followed Dr. Trudeau's definitions, classifying patients as incipient, advanced, and far advanced, and after treatment, apparently cured, disease arrested, much improved, stationary or failed.

Definitions of Terms Employed.

Incipient.—Cases in which both the physical and rational signs point to but slight local and constitutional involvement.

Advanced.—Cases in which the localized disease-process is either extensive or in an advanced stage, or where with a comparatively slight amount of pulmonary involvement the rational signs point to grave constitutional impairment, or to some complication.

Far Advanced.—Cases in which both the rational and physical signs warrant the term.

Apparently Cured.—Cases in which the rational signs of phthisis and bacilli in the expectoration have been absent for at least three months, or who have no expectoration at all; any abnormal physical signs remaining being intrepreted as indicative of a healed lesion.

Disease Arrested.—Cases in which cough, expectoration and bacilli are still present, but in which all constitutional disturbance has disappeared for some time, the physical signs being interpreted as indicative of a retrogressive or arrested process.

Improved.—Cases in which there has been some marked gain in the condition of the lungs, or in which there has been marked amelioration of the constitutional disturbances. Cases with simply a slight gain in weight are not placed under this term.

The classification is, I must admit, open to criticism but at present I see nothing more satisfactory. The use of the term apparently cured in cases where tubercle bacilli have been absent three months only, or where there is no sputum, is open to question. It cannot certainly be used as equivalent to the term absolute cure used by some phthisiologists. For this to be used there should be a probationary period of at least two years, possibly longer. Using the term in this way we would naturally expect some relapses or recurrences in the course of a few years, while in the case of those discharged with disease arrested the maintenance of the gain made will be entirely dependent upon the mode of life adopted after the return home.

Instead of presenting to you three years statistics separately I shall avoid confusion and save time by grouping together the results of five years work. You will notice that many advanced cases have been admitted. Though our Sanatorium is for the treatment of the earlier cases, we have from time to time admitted the more advanced cases rather than have our beds vacant—not in hopes of cure of these cases, but knowing there is no provision for such patients elsewhere, we have worked on the principle of the greatest good to the greatest number, but we can never admit them to the exclusion of those early cases in whom a return to health is reasonably to be expected.

For the past three years we have been endeavoring to establish in or near Toronto an institution for the more advanced cases, but have so

far been constantly blocked by the property owners in the vicinity of each suitable site. As soon as the site can be arranged we are prepared to erect the Home at once, and have already the promise of two cottages and $25,000.00 for the erection of a suitable building. Being in or near Toronto it will be built with the expectation of using it for clinical teaching.

Up to August 31st. 1902 there have been admitted.....606 patients
On this date there are still under treatment..... .... 52 "

This number having been discharged.....554 "
During these 5 years there remained under treatment less than one month..... 80 "
and these are obviously not to be reported on.....

Leaving to be reported on.....474 "
These have been classified as follows;—

Condition on admission.	Apparently cured.	Disease arrested.	Much improved.	Stationery.	Failed.	Died.
134 incipient cases	78	38	16	2	... .	.....
200 advanced cases	17	100	48	23	10	2
140 far advanced cases	1	22	45	39	27	6
474 Total 474	96	160	109	64	37	8

These results show out of 474 cases, a large proportion of which are far advanced, 96 or over 20 per cent. apparently cured, and 54 per cent. of apparent cures and arrested cases; of the incipient cases 78 out of 134, or 58 per cent., apparently cured, and 87 per cent of apparent cures and arrested cases. These are the actual results with patients remaining under treatment in the majority of cases an insufficient length of time. But every patient, whether apparently quite well, or with the disease quiescent leaves the Sanatorium knowing how to live properly, and is in a position to carry on his new method of life wherever he may go. He is taught that he may reasonably expect to retain all he has gained, but that continued progress will depend entirely upon the care he takes of himself, that, if careless, reinfection or an extension of his disease may at any time occur.

Knowing what is necessary to keep in good health, the patient feels his own responsibility, and in the majority of cases the after results are very encouraging.

PRESENT CONDITION OF 256 PATIENTS DISCHARGED FROM AUGUST, 1897, TO AUGUST, 1902, WITH DISEASE ARRESTED OR APPARENTLY CURED.

Realizing that the value of any plan of treatment depends not only on the immediate result, but also on its permanency, and that the after history of discharged patients is of great importance, it has been my endeavor to keep in correspondence with all the patients who have gone out from the Sanatorium. I have sent letters of inquiry with question blanks to those who have left either apparently cured, or with the disease arrested, their present condition I give in the following table:--

96 CASES APPARENTLY CURED. (Of these 62 had bacilli in the sputum on admission).

In good health, August 1st, 1902	79	
Not perfectly well, but in fair health	3	
Dead	5	
Not heard from	9	
	—	96

160 CASES WITH DISEASE ARRESTED. (Of these 142 had bacilli in the sputum on admission.)

Apparently in perfect health, with no cough or sputum	26	
As well as on discharge	88	
Not as well as on discharge	2	
Dead	24	
Not heard from	20	
	—	160

That so many remain in excellent health after the elapse of from one to five years is most encouraging, and by following the rules of life learned at the Sanatorium, a fair proportion of the cases classed as arrested have progressed to apparent cure.

The five deaths occurring amongst the apparently cured cases call for a note of explanation. The first was a youth of nineteen, who, on discharge, appeared quite well. He was, however, growing very rapidly, and was not putting on weight in proportion to his height. He was advised to go to Calgary, or if he remained in Ontario to live on a farm. Contrary to all advice, he remained about his home in a large town, doing nothing, and spending the greater part of his time indoors. The result which followed could scarcely be unexpected. A second case died of Tubercular Meningitis a year after discharge, having been in the meantime at work on the farm, and having at no time any return of his pulmonary symptoms. The other three cases were women, all of whom returned to their household cares and worries without allowing themselves sufficient relaxation and hours out of doors.

These cases have only served to teach me, and impress me with the fact that the after history is almost altogether dependent upon the patient himself, and that the exercise of strict care is all that is necessary to keep well.

A few patients have been sent to the West to live, but almost all have again taken up life in their former homes. They comprise tradesmen, clerks, book-keepers, stenographers, physicians, dentists, barristers farmers, engineers, tinsmiths, and men and women from many other walks of life. They are living in all parts of Ontario, and in the lower Provinces. If a patient is cured in his home climate there seems to be no reason why he should not remain well in it.

There is no need of sending every patient to the West or South as soon as a diagnosis of tuberculosis is made; fully as good results can be obtained at home. It is not the climate that cures; it is the careful supervision of the patient by his physician which is of most importance, climate being entirely secondary. Rather than have your patient go away from home amongst strangers where he will not have proper attention, treat him at home, if you can devote the necessary time to thoroughly ground him in the essentials of cold sponging, life out of doors, care of the sputum, the use of the clinical thermometor, regularity at his meals, in the hours of sleep, rest and exercise, and see him at frequent intervals that his daily programme may be changed according to indications. I want the profession to fully realize the curability of tuberculosis, and of the necessity of an early diagnosis to secure the best results. For those who cannot leave home for treatment the physician must make it his duty to give them the necessary time and attention, and see that his instructions are faithfully carried out. If the physician would do this conscientiously, and not treat his patient as a chronic with little hopes of cure, there would be more cures, and the public would be less apt to take so readily to the proprietary nostrums.

I hope that the success that has attended our efforts in this work, and the unvarying success of Sanatorium treatment in the United States and in Europe will be a stimulus to the profession and the public to urge on our Governments and our philanthropists the necessity for the provision of Sanatoria throughout Canada. The National Sanatarium Association has established two at Gravenhurst, one with sixty beds for paying patients at $12.00 to $15.00 per week, and a second with at present seventy-five beds for the indigent and those who cannot pay the full rates. Both are for the earlier cases.

More Sanatoria are required, each province should have one or more. The earlier we can have them established, and use them as centers of hygienic education for our people, the sooner may we hope to control the ravages of this dread disease which is accountable for the yearly loss of so many of our fellow citizens.

Gravenhurst, Ont.

VOMITING OF PREGNANCY.*

JOHN HUNTER, M. D.
Physician to the Toronto Western Hospital.

THIS brief description of a recent case in practice not only supplies a suitable text for the discussion of our subject, but also enhances our interest in the practical character of the paper. Patient—age 20; healthy, good family history, married and in fourth or fifth week of second pregnancy. In the earlier months of first pregnancy, vomiting was quite frequent, but never alarming. She complained of some nausea when nursing, and weaned the child at sixth month. Nausea and vomiting began about the tenth or twelfth day of second pregnancy. Very little food was retained. Rest, restricted diet, and laxatives with oxalate of cerium, bismuth, cocaine, bromides, morphine and counter irritants, were the means used to control the gastric irritability. The patient did not complain of any pain in the pelvis, nor did an examination of the uterus and appendages reveal any cause for the vomiting, apart from the pregnancy.

During third week, vomiting persisted day and night. All foods, drinks, or medicines were instantly expelled from the stomach. Dr. Hay saw the case with me on Friday night, and her condition was so alarming that we almost dispaired of being able to save her. For two or three days the patient had been sustained by rectal injections of peptonized milk and eggs with stimulants, also by hypodermics of strychnia and nitro-glycerine. I remained in attendance all Friday night, and early on Saturday morning had her removed to the Toronto Western Hospital. Her condition then—as it practically had been for twelve hours before—was a state of collapse. Restlessness and delirium, subnormal temperature, weak, rapid pulse, icy cold extremities, and persistent vomiting of a coffee-ground mixture were present. I gave an anæsthetic, and Dr. Hay, finding the cervix soft and patulous, was enabled to empty the uterus quickly with a curette. It was packed with iodoform gauze. Vomiting began again as soon as she came out from under the anæsthetic, and persistd all day. The packing was removed in the morning. An enema containing a large dose of bromides, with some chloral and stimulants was given at bedtime. Hypodermics of morphia, strychnia and nitro-glycerine were used during the night. She obtained some rest, and slight relief of the vomiting. The slightly improved condition remained until about 1 p.m.

*Read at the Toronto Medical Society, Jan. 8th, 1903.

Sunday, when the vomiting of coffee-ground material returned as virulently as ever, and the patient again passed into a state of collapse. Heat was applied, the foot of bed raised, hypodermics of strychnia, nitro-glycerine and stimulants were given, and a high injection of a large quantity of hot, normal saline solution. The patient began to rally about 4 p. m., and no further alarming symptoms occurred. The vomiting gradually ceased, and was followed on Monday by a spasmodic cough that was very persistent for a week and as uncontrollable as the vomiting. The muscles of the lower limbs became so wasted and flaccid that she had to be carried round for about a week. She quickly regained normal health and strength. When the vomiting was most virulent, there was an unsatiable craving for ice-cold water. Dr. Carveth thought that this might be, at least, partially gratified. Glasses of it were given, at short intervals, with the result of aggravating the symptoms. Sipping hot water gave most relief.

We have seen in this case a young woman of fine physical and mental development, enjoying good health, become pregnant, and, as far as it is possible to discover, without any predisposing or exciting cause—excepting the pregnancy—suddenly seized with reflex gastric disturbance of such a pernicious character as would soon destroy life, unless the gravid uterus be emptied. Now, in regard to this morbid condition, physicians are placed in a somewhat anomalous position. In the case of any other disease, one of our first duties is, if possible, to remove the cause. However, if we attempt to carry out this rule as related, to the vomiting of pregnancy, viz., to remove the cause, we find ourselves not only in direct antagonism to a natural law, but also to a divine mandate. The command, "To be fruitful and multiply," has never been annulled. Under such circumstances, we are certainly not warranted in interfering with healthy married people in their efforts to propogate the race, and especially in our own country with its vast uninhabited territory. Holding then that we are not justified in trying to remove the one most potent exciting cause in innumerable cases of this disturbance, we are obliged to search out every other possible source from which the "vomiting of pregnancy" might arise.

In all these cases our attention is primarily directed to the reproductive organs. No physician would be justified in allowing one of these cases to proceed to any marked degree of severity without a careful examination of all the pelvic structures: the position of the uterus and ovaries, the presence of acute or chronic inflammation in any of their tissues, the possibility of venereal infection, or the

existence of any growth, benign or malignant. The condition of bladder and rectum call for special investigation. Previous pregnancies, if any and the course of menstruation from puberty, have to be considered also the frequency and effect of coition.

Leaving the pelvic viscera, we come to the examination of the gastro-intestinal tract. Any pathological conditions in the digestive system are apt to be aggravated by the advent of pregnancy, as there must be a great increase in functional activity in order to supply nourishment for the development of the embryo. In all cases of pregnancy, complicated by excessive vomiting, the physician must carefully examine all the viscera involved in the digestive process. Acute or chronic inflammatory processes, displacements, obstruction from tumors, as well as all forms of functional disturbance, have to be considered. The question of a suitable diet, in these cases, severely taxes the physician's intelligence, as well as the skill of the nurse.

The third great process to be considered is the eliminative one. However, as the purport of this paper is rather to introduce than to fully discuss the subject, I will group under this head, the respiratory renal, glandular and cutaneous systems. The increase in waste products, such as carbonic acid or urea, thrown into the vascular system of the mother, very greatly augments the functional activity of the eliminative organs. Under normal conditions this increased activity is provided for by some hypertrophy of the heart. We can easily understand how any impairment of cardiac force could produce conditions of the stomach that would be attended by marked irritability. Any interference with renal secretion is very quickly reflected by the stomach. The respiratory system is fully taxed in providing more oxygen for the fœtal blood, and in disposing of the excess of carbonic acid. The skin has to deal with an excess of other waste products. Any organic changes, or functional disturbances, in one or more of these systems, may be predisposing or exciting causes in the vomiting of pregnancy.

Closely associated with, and in a very large measure controlling the functional activity of all the systems already mentioned, is the nervous system with its psychical functions. We have only to study the transformation of the artless child into the modest maiden at puberty, to see how profoundly the generic system affects the complex nervous system. The advent of pregnancy with its hopes and fears, its joy or remorse, is quickly felt throughout the whole body, and, like important news in the social, commercial or political world, stimulates or paralyzes. Mental conditions, as seen in the protean forms

of hysteria and mania, as well as structural changes in the nerve cells or fibres, may all be influences in exciting or maintaining gastric irritability.

I shall only mention one more cause of the vomiting of pregnancy, viz., criminal abortion. The disgrace associated with illegitimacy and the dread of the suffering and danger of childbirth, or the wanton desire to be free from the obligations of motherhood, are some of the strongest influences impelling women to resort to criminal means for procuring an abortion. The fact that the services of some medical men can be obtained to accomplish this purpose, constitutes one of the darkest blots on the fair escutcheon of our noble profession. The doctor, who for the sake of a fee—small or large—becomes the guilty accomplice of these women, reflects the moral degradation which avarice and the loss of every vestige of honor beget, and I do not know any terms sufficiently strong to fully express the odiousness of such conduct, but I do think that some steps should be taken whereby as a profession, we could express our detestation of such a crime, and our willingness to help in exposing and driving from out our ranks, all who attempt to commit such a diabolical deed. In these cases, whether the act be done by the patient herself or by a medical man, the gastric disturbance is due, either to irritant action of the drugs used, or to the septic poisoning from unclean and imperfect operative methods: for this murder, like all others, must be committed quickly and secretly.

In conclusion I do not think it necessary to go very fully into the question of treatment. A correct diagnosis of the cause or causes practically settles the course of treatment. If medical, a scientific or empirical use may be made of such drugs alone, or in some combination, as oxalate of cerium, calomel, bismuth, hydro-cyanic acid, ingluvin, menthol, cocaine, the use of counter irritation, rest, restricted diet, rectal alimentation, and insisting on the avoidance of sexual intercourse or mental excitement. If surgical, the correction of any form of displacement, by tampons or pessary, and the treatment of any inflammatory conditions present in either the cervix, tubes, or ovaries, or dilatation of the cervix.

The most difficult problem comes in the question of when to interfere with the course of pregnancy. The date in pregnancy is a very important factor. Treatment in the latter months would hold out the hope of saving the child as well as the mother, but pernicious or uncontrolable vomiting in the early months makes the risks to the mother's life of paramount importance to that of the preservation of the foetus.

The case with which I opened this paper pretty clearly defines the boundary line between conservative and radical methods of treatment.

The persistency of the vomiting day and night, the early period in pregnancy, the coffee-ground character of the vomited matter, showing a profound degeneration of the blood itself. When such conditions as restlessness, delirium, small, feeble, rapid pulse, subnormal temperature, icy cold extremities, supervene, or an approximation to them, and no sufficient cause, apart from the gravid uterus, can be found for them, the call for the termination of the pregnancy is absolute. Two courses of procedure present themselves, and are to be carried out with the strictest antiseptic precautions. 1st. The use of the sound and tampon. 2nd. Dilatation of the cervix and the use of the curette, with or without packing of the empty uterine cavity. As a rule the emptying of the uterus, when not too long delayed, brings prompt and most welcome relief to patient, physician and friends. The after treatment consists in rest, cleanliness and restricted diet. Whether such a patient should be allowed to become pregnant again is a question that requires very careful consideration.

THE ACTION OF X-RAYS ON DISEASED STRUCTURES.

By A. GROVES, M. D.,
Medical Superintendent Royal Alexandria Hospital, Fergus, Ont.

IT is an undoubted and undeniable fact that the x-ray has a curative effect on many forms of abdominal growth and tissue change and the suggestion naturally arises as to how it acts. It is claimed by some that it inhibits, if it does not destroy germ life, and by this action its good effects are explained; but to make this theory tenable it must be shown that the x-ray is destructive to germs and, even if this were proven, it will not explain its curative power over diseases which do not come from germs To my mind its effects are a result of its distinctive action on the cells of the body. If the healthy skin is exposed for a sufficient length of time to the action of the x-rays a so-called burn results, which in reality is not a burn at all, but simply death of the cells of which the skin is composed. It would appear that the x-ray has the power to kill almost if not all cells in the body if there is sufficient exposure, but of course those which have the least resisting power die soonest. Now, the cells of which any new growth is composed are not tenacious of life, but have powers of rapid multilplication. Take cancer as an example. It may be dead and sloughing at the centre, whilst rapidly extending at the periphery. A growth such as cancer is one in which the cells have

varied from the type and become monstrosities, and monstrosities, although they may have powers of rapid multiplication, are not tenacious of life. If then the Roentgen ray will destroy the normal healthy cells of the body, how much more is it likely that diseased cells will not be able to resist? To produce a curative effect on diseased structures by means of the x-ray, it is necessary in many cases to push the exposure almost, if not entirely, to the point where normal tissues are attached. A case may be treated day after day with little apparent benefit, except perhaps the relief of pain, until the skin shows signs of irritation, when improvement will begin almost immediately. The x-ray then must be used with sufficient strength and for sufficient time to destroy the abnormal tissue, and this must be done in such a way that normal tissues are not injured if this be possible. The dosage if it may be so called must be carefully studied in order to so graduate it that healthy tissue is not injured along with the unhealthy. As operators become more expert, injury will gradually become less and curative effects will be more certain. Many questions are yet to be settled in the therapeutic application of this agent, not the least of which is as to the proper duration of each application. I am inclined to favour longer sittings than those advised by some writers, for, provided no injury is done, the more prolonged the sitting the greater will be the effect on the diseased cells. In this hospital, the time of exposure hitherto has been fifteen minutes, and results, not only in epitheliomata and cancerous growths, but also in chronic eczema and goitre, have been very good. A case of eczema of more than thirty years standing, and which had resisted every means of treatment adopted by many physicians, was entirely cured in three weeks by the Roentgen ray. Like every other means of treatment, it is well to have the patient under proper conditions and the case carefully watched from day to day.

MENSTRUATION IN A MALE.

Léri reports this unique case as one of pseudohermaphrodism. The subject was 75 years of age, was married, and gave the history, corroborated by a sister, of having menstruated regularly for 37 years, beginning at the age of 18. The breasts were those of a male, the external genitals being partly male and partly female in type. The voice was that of a eunuch. Autopsy showed the presence of undescended testicles. Neither uterus nor prostrate was found. No explanation of the apparent menstruation was furnished by the autopsy.—*American Medicine.*

A RESUME OF THE RECENT PATHOLOGY OF INSANITY.*

By F. E. LAWLOR, M. D.
Assistant Physician, Nova Scotia Hospital.

FOR pathological purposes we may divide mental disorders into two classes: the first, from which recovery is the rule, belonging to the so called functional maladies; the second, in which restoration to normal mental health cannot be looked for, namely, that of organic degenerative type. Nevertheless a sharp line of demarcation cannot be defined between the two forms, because we find that cases which, from all appearances, begin as a primary form may, by continuance or repeated attacks, pass over to the degenerative type. Even in this second class it is unusual that, with our present methods of investigating, a definite pathology is found to exist, as compared with that accompanying the clinical symptoms which are found in the kidney in nephritis. Nevertheless in mental disorders we at times find quite as exact symptoms as those known to exist in physical maladies, and one might be led to suppose that these clinical pictures would have for their base certain positive changes in the nerve cells. However such a corresponding condition is found to be the exception. During life, in different persons, we may have quite inconsistent and opposite clinical pictures, even though in both cases the pathological conditions are the same. For instance it has been observed that a tumour pressing upon the cortex may in one individual produce a condition of profound depression, in another, a marked state of excitement.

Turning to the simple insanities, mania, for instance, of the cell lesions in this condition little is known, therefore let us consider the circulatory disturbances as found in this condition. It is a well known fact that during life, the brain is subject to temporary venous congestions, vascular hyperaemias, and subsequent oedema cerebri, or the opposite, a condition of arterial spasm. Now with such a disturbance in the circulation we have increased pressure and consequent impairment in the outward flow of the lymph from the intrinsic cerebral tissues, and, as is known, lymph is loaded with the products of tissue waste, we must expect naught but serious interference with the normal function of the nerve cell, when we consider that it is being brought constantly into contact with these toxic properties. But, on the other hand, hyperaemias and oedemas are often seen accompanying fevers without any mental disturbances whatever.

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*Read at the Halifax Branch of the British Medical Association, 10th December, 1902.

Another etiological factor worthy of consideration is the storage of toxic products from the alimentary canal, due to defective elimination, and disordered products of the secretory glands, or the reverse, a diminution in the secretions. These conditions are also frequently found unaccompanied by any marked mental disturbance. Our only conclusion therefore must be that there is a predisposing factor lying dormant, and when an abnormal change takes place in the life history of the psychical cells, they are rendered more liable to disturbance in their functions through the toxaemias or habits of life. This predisposing tendency may be acquired, but on investigation it has been found that in the vast majority of those mentally afflicted, a direct inherited predisposition to insanity exists.

On making clinical and chemical examinations of the blood and excretions in case of acute mental disorders, the presence of poisonous substances is found to exist, the products of defective elimination of intestinal putrefactions, which being absorbed and reaching the cell through the circulation, bring about a marked disturbance in its vital properties, with the result that there is at first a stage of excitment followed by stupor. Possibly in these cases we have to deal with a rapid degeneration of the elements of the vascular wall, accompanying which we have fragmentation and necrosis of the cell, followed by death or recovery according as the infection is mild or severe.

As to the microscopic appearance of the cell accompanying the toxaemic infection. The cells are swollen, cloudy, and, within the protoplasm, both fine and coarse granules are to be made out, the nucleus is not readily stained, is frequently displaced, shruken and of an irregular shape in the vascular spaces, sometimes in such quantities as to block the channel and interfere with the outward flow of the lymph, are found broken down leucocytes. and large quantities of debris.

Taking up the organic degenerative insanities, the most important actual lesion of the cerebral structures predisposing to this type is the change in the vascular structures which may be classed as periarterial, endarterial, and atheromatous ; nevertheless, the most diverse mental disturbance may be produced by these lesions. Monte has demonstrated the fact that the nerve cells practically die within a few hours after their blood supply has been cut off by artificially inducing minute embolisms of the cerebral arteries. And Berkley states that it is no less true that, with an inadequate supply of nourishment, an equally certain though slower process toward cell death must be induced. The nerve cell gradually loses its activity ; changes beginning in the more distal portion of the cell proceed toward the centre until finally the nucleus becomes impli-

cated, and many put down this insufficient nutrient supply as the chief cause of the pathological changes found in the frequent cases of dementia beginning after middle life. Berkley also states that he justly believes that the majority of various types of organic degenerative forms of mental disorders have their pathology in these slowly progressive vascular changes, the first alteration being accompanied by gradual change from perfect insanity to slight mental disturbance, such as instability without cause, forgetfulness, etc. Later, when the nutrient plasms becomes altered owing to the progressive vascular changes, the nerve, unaccustomed to this lack of food, shows evidence of rebelling by a stage of acute excitement, and when the supply of nutriment has fallen below that point at which the cell can be maintained, and certain changes have taken place in the normal chemical and histological condition, there results a final stage of dementia. Notwithstanding these vascular conditions, not all dements show signs of any pronounced vascular lesions.

Before concluding I would like to say a few words on the pathology of general paralysis of the insane. Various are the opinions advanced to explain the true nature of the morbid process in general paralysis, but I will not mention more than two which are considered to be most important.

1. That it is primarily a degeneration of the nervous elements of the cerebral cortex.

2. That it is the result of a general toxic condition, which effects especially but not exclusively the cerebral tissues.

The first theory was advanced by Tuczek, and it has received many strong supporters, among whom Mott takes a prominent place. In opposition to this we have the theory advanced by Angiolella. He put this disease down as the result of a general toxic condition, which first leads to morbid changes in the small cortical arterioles and capillaries, although toxic agents may at the same time affect the nerve cell; but he states that the alterations in the nerve cells are, for the most parts the consequence of the vascular alterations. Nevertheless, he found in some cases that the circulating toxines, by direct action on the nerve cell, produced degeneration.

Ford Robertson thinks this to be only minor part of the pathogenesis of general paralysis, for his extensive histological study of the brain during all stages of the disease has led him to believe that the capillary lesion is the one essential alteration.

The theory that general paralysis depends upon a general toxic condition, which specially implicates the small vessels of the nervous system, is summarised by Angiolella as follows:—It appears

that the products of syphilitic infection circulating in the blood are the cause of the anatomico-pathological process of general paralysis. He points out that the anatomical process appears to begin in the vascular system, the interstitial and parenchymal alterations are the consequence of vascular lesions.

It should be borne in mind that the structure of the capillaries of the central nervous system differ from the structure of the other organs in that they possess an adventitial coat, the fibres of which consist of an elastic tissue differing from that found in other tissues. Ford Robertson puts this down as a strong evidence that in various different toxic conditions the capillaries of the central nervous system are prone to undergo degenerative changes, while those of other organs escape; and he maintains that this is due to a remarkable selective action on the part of a higher structural differentiation.

Mr. Chairman and gentlemen, my purpose was simply to endeavour to place before you this evening what seem to be at this present early stage of investigation a few important facts and probabilities with regard to the pathology of mental disease.

SOME INDICATIONS FOR TREATMENT IN THE MENTALLY DISEASED.*

BY J. A. MACKENZIE, M. D.,

Assistant Medical Superintendant, Nova Scotia Hospital; Demonstrator of Anatomy, Halifax Medical College.

IN the consideration of this subject it is not my intention to encumber you with some of the numerous new theories regarding the treatment of mental diseases. They like all other new unproven ideas are to say the least debatable. Neither is it the intention to surcharge you with the countless drugs of both ancient and modern discovery which from time to time have been vaunted as specifics in some one or other of the various forms of mental disease, but to place before you, as briefly as possible, some known indications, leaving for your intelligent consideration the proper treatment to pursue.

With reference to the present day medical treatment of the insane, we come to a region of exceptional and confounding activity. This activity can be observed as extending in three directions, viz, in the extension of the long list of hypnotics, in the development of new opium derivatives, and in the production of new bromine compounds. Of the

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hypnotics we have *dormiol*, *tribromo-salol* and *hyoscin hydrobromide*. Of the opium derivatives there are *dionin*, *heroin* and *peronin*. In the new bromine preparations there are *bromalin* and *bromidin*. Individual observers differ as to the action of these drugs and the inference is that much is yet to be learned about their conduct in disease.

In mental disease, as in bodily, no one drug or combination of drugs can be said to produce a certain requsite result till faithfully tried and the action observed in each individual case.

That drugs act differently on different individuals is nowhere better illustrated than in the treatment of the mentally affected. In some cases of great excitement it is surprising what enormous doses of certain sedatives or hypnotics can be given a patient, yet having no appreciable effect, while the administration of a single ordinary dose of another sedative or hypnotic may produce all that is desired. To occupy your time, therefore, in detailing some of the experiences in the use of certain drugs and their erratic actions in the treatment of the mentally affected would be using time unprofitably and, to say the least, tedious and unsatisfactory.

A brief consideration of some of the indications for treatment in those cases might however be practical.

That the treatment of any diseased condition may be properly applied, it is necessary first of all to determine the cause, and having so determined endeavour to remove it. In the vast majority of cases of mental disease we find some bodily disease or ailment accompanying the mental disturbance, which, if treated and recovered from before destructive brain changes have become too pronounced, is invariably accompanied by mental recovery as well. It has long been recognized that a sympathetic connection exists between the body and the mind. Such influences are familiar in the irritability of temper from the sluggish action of the liver, or the hopeful view phthisical patients have of their ultimate recovery.

Among bodily conditions most directly conducive to mental disturbances are diseases of the vascular system. That disease of this system may cause the unbalancing of the mental equilibrium can be easily understood from the fact that the brain—the organ of mind—enclosed as it is in a rigid cavity, is unable to adjust itself, even to slight alterations in the blood pressure. When we consider the delicate structure of the brain, and the grave changes which follow even such slight alterations in its cells as to be scarcely perceptible under the microscope, we can easily see how a slight alteration in the blood pressure is of far greater importance to it than any other organ of the body.

Changes in the circulatory system are usually produced by disease of the vessel walls, by diseases of the thoracic or abdonimal and pelvic organs. Of diseases of the thoracic organs the one, acting through the circulatory system, and probably most productive of direct mental changes is found in cardiac disease. That the supply of blood to the brain is mainly regulated by the vigorous action of the heart, the general arterial pressure and the turgescence or emptiness of the venous system may be observed from the loss of consciousness consequent upon the sudden failure of the heart's action, as in synocope, a condition due to cerebral anæmia; so that a variation in the blood pressure of the brain will undoubtedly be manifested by a corresponding change in the psychical energy.

In the absence of a neurotic predisposition, heart disease may do nothing more than produce a permanent irritability of temper, thus completely altering the character and conduct of the individual; the condition probably never terminating in technical insanity. As old age advances, however, there is a tendency to intermittent delirium, great mental feebleness and obstinate insomnia, with a suspicious attitude of mind. Some observers even maintain that a similiarity exists in the mental symptoms of the insane suffering from like cardiac lesions.

It cannot be justly assumed that because the heart's compensation is apparently complete by the absence of serous effusion, albuminuria or œdema, that the delicate nerve cells of the brain may not be suffering from the impaired condition of the circulation.

With reference to the statistics on the subject I find in a table compiled by Dr. Greenlees that of 672 mental cases in which the condition of the heart and circulation was obtained on admission, 13 per cent. of the total had definite organic cardiac disease, while 44 per cent. had some functional circulatory disorder of one kind or another. He also found the functional disorders were more common in recent or acute cases. Esquirol found heart disease in nearly 7 per cent. of his melancholiacs, Calmeil and Thore in as many as 30 per cent. while Sutherland, in an analysis of 42 post mortem examinations, found the heart diseased in 34. That heart disease is a most grave complication of insanity is an observed fact. Dr. Wilkie Burman says that 32 per. cent of the cases dying from this cause, lived only three months or less in the asylum.

Of the other thoracic organs which may be diseased, their action on the circulation would be secondary by diminishing probably the oxygenation of the blood, thereby affecting the nutrition of the nerve cells, resulting in an imperfect performance of their functions.

The anxiety, depression and irritability of the sufferer from chronic bronchitis resembles much those of mitral disease, which to some extent is dependent on the same cause.

Of diseases of the abdominal and pelvic viscera producing anæmia or malnutrition, mention may be made of diseases of the digestive system. In the majority of melancholic cases coming under treatment there is found disordered digestion of one kind or another, producing changes in the nerve cells, which changes are all accounted for by the pathologist.

All are familiar with the risk of mental disease following parturition, probably due to the sudden change in the pressure of the circulatory system. The brain nerve cells being unable to adjust themselves to the new order of things are liable to take on abnormal functions. Likewise it may be said that any pelvic organ whose diseased condition is productive of malnutrition is also a fruitful source of mental disease in the unfortunate individual so predisposed.

In general if the brain nerve cells are to perform their functions properly it is necessary that not only must the quantity but the quality of the blood be equivalent to the demand upon them, which can only be supplied by each and all organs of the body performing their various functions properly.

Mention may here be made of the frequency with which bodily disease is found among the insane. Dr. Conford, of the Coppice Hospital for Insane, Nottingham, says of 175 cases treated at that institution, in ten instances there were organic diseases of the heart, and in twenty some functional disorder of the circulation. In seventeen there was emaciation or weakness from malnutrition, in seventeen, constipation, in eight, dyspepsia, in seven, bronchitis, in five, phthisis, in two, asthma, in two, emphysema, and in one, malignant disease of the lungs.

Chronic renal disease was present in six cases, glycosuria in four, hemiplegia in four, old infantile paralysis in three, neuralgia in three. Uterine complaints such as menorrhagia, etc., were found in eleven cases, and puerperal complications in three.

From the pathologist we learn how and what changes are produced in the nerve cells, their function being influenced by the sudden or gradual alterations in the circulatory system resultant on diseased bodily conditions.

It is a well known fact that slight illnesses among the sane produce depressing influences, but how much more depressing must the effects be in persons whose will power and judgment are inherently weak.

Treatment must therefore be directed in view of these conditions. Care is particularly necessary in the beginning of mental illness and before pronounced symptoms of insanity have declared themselves.

In late years not only have drugs been of great value in counteracting some of the physical evils which undermine the general health, but also has modern surgery aided very materially in the relief and prevention of mental disease in suffering humanity.

Dr. Monton, of the Eastern Michigan Asylum, has reported many cases restored to sanity by gynæcological operations. The late Dr. Rohe, of the Maryland Hospital, and Dr. Hobbs, of the London, Ont., Asylum, have each also recorded many cures as a result of gynæcological operations in the insane. Many other surgeons claim equally good results from surgical interference where indicated.

From the foregoing, it is evident that the possibilities of mental recovery in any case depend much on the rapidity with which the various diseased or disordered bodily functions can be restored to their normal condition. If changes more or less grave have already taken place in the brain nerve cells, the possibility of normal mentality following the physical restoration is very doubtful. It remains therefore for the attending physician to determine the bodily cause underlying the mental disorder, and by any means at his disposal, be it medical or surgical, to remove it as rapidly as possible.

In conclusion, though the subject is one of such magnitude, presenting as it does so many aspects and deserving of a more thorough consideration, yet I found it impossible to develop it at all satisfactorily within reasonable limits, and hope I shall be pardoned for making such a superficial effort at its presentation.

LIGATION OF THE INFERIOR VENA CAVA.

In a women of 36, Henzel performed a nephrotomy on account of pyonephrosis, and later a nephretcomy. On account of numerous adhesions to all neighboring structures, operation was difficult and attended by tearing of the inferior vena cava. By means of two circular catgut ligatures the vessel was ligated above and below the wound. Recovery was interrupted, except for a slight edema of the lower extremities. Since then the patient has enjoyed perfect health.—*American Medicine.*

CURRENT MEDICAL LITERATURE.

Conducted by A. J. Mackenzie, B.A., M.B.

BLOODLESS OPERATIONS.

In *The Journal of the American Medical Association*, Jan. 10th, the address by Dr. Lorenz, at the Northwestern Univerity, on "Bloodless Operations" is reported.

The bloodless method affords a speedy and safe method of correcting deformities, which can only be improved, never removed by resections or alterations of the bony skeleton. The bones are put into position so that function will determine their development in a normal manner. Clubfoot, congenital hip-dislocation and wry-neck are the deformities most frequently treated, but Dr. Lorenz believes that the method is applicable to angular deformities of joints and may be to spinal deflections.

GROWTH OF BACTERIA IN THE INTESTINE.

In the *British Medical Journal*, Dec. 27th, Smith and Tennant, of Queen's College, Belfast, present the results of work performed on this subject in connection with the scientific grants committee of the British Medical Association. In their experiments, rabbits and dogs were made use of, and the object sought was the determination of the relative number of bacteria in various parts of the small intestine, and the way in which this relation was modified by various diseases. In each case the method followed was to transfer immediatly after death, a cupful of the intestinal contents to melted agar at 40° C, and this was poured into a Petri's box. This method is applicable to the species of B. coli and B. proteus, and the variations in growth of bacteria which can be cultivated can be taken as an index of bacterial growth as a whole in the intestinal contents.

The chief conclusions arrived at were as follows: The growth of bacteria in the small intestine is very limited in comparison with the amount of nutrient material present—in the larger intestine the number is very much greater. The relative number of bacteria increases regularly and rapidly the greater the distance from the small intestine, suggesting an inhibitive power situated in the intestinal glands. Injury, or the presence of disease or of parasites at any point in the intestine, is associated with a great increase in the number of bacteria. The relative

rarity of bacteria in the stomach is generally traced to the acidity of the contents; but the contents of the great intestine is generally also acid, but there is there a profuse proliferation of micro-organisms. Too much stress has been laid on the activity of the bile as a germicidal agent, though this is undoubted—the addition of 50 per cent. bile to the culture medium inhibits growth of B. coli. The region of the ileo-caecal valve is one of the first places where a disturbance of the regulation of bacterial growth takes place, and this region is very subject to attacks of inflammation of various kinds. The appearance of pathogenic forms of bacteria, and the disturbance consequent thereon, is always accompanied by an increase in the number and in the virulency of the forms usually present, and apparently in a decline in the normal inhibitive power.

LIGATURE OF THE LEFT COMMON ILIAC ARTERY FOR TRAUMATIC ANEURISM—RECOVERY.

Among the "Hospital Reports," *British Medical Journal*, Jan. 10th, is one of marked interest from No. 15 General Hospital, Howick, Natal, by Arthur A. Martin, Civil Surgeon of the South African Field Force, which adds one more to the meagre list of successful cases of ligature of the common iliac artery.

The patient, T. S., of the Victorian Mounted Rifles, Aet 31, while in action against the Boers at Vryhead, received a bullet wound in the left groin accompanied by pain and faintness. During four weeks in bed a hard lump appeared there, when an accident in which another person fell on him with his knee upon the site of the injury, markedly increased the symptoms. On Nov. 18th, when brought to the hospital, patient was thin, pale and wasted, healed wound of entrance two inches above Ponpart's ligament and internal to the course of the external iliac artery, of exit below the crest of the ilium on the same side. A marked bulging was apparent above Ponpart's ligament, with a heaving pulsation synchronous with systole, the whole area was boggy to the touch, and other signs were present to give reasonable certainty to the diagnosis of aneurism of the external iliac artery.

An expectant treatment was adopted for a time, elevation of the limb, pressure, &c., but the condition became rapidly worse, the aneurism extended to a finger-breadth below the imbilicus, pain very severe, temperature 100-102, and patient rapidly losing strength. Operation was determined upon, an extensive incision was made and the sac exposed which looked very thin and soft. It was impossible to reach the ex-

ternal iliac above the sac, therefore the common iliac was tied and divided between a double ligature, pulsation immediately ceasing below. The wound was at once closed. During the first week there was anaesthesia and coldness of the limb, oedema with some formation of blebs, but by Dec. 22nd the circulation was well established and sensation normal, while a month later the patient could go about with crutches, move the leg freely, was quite free from pain, and the mass was hard and about the size of a goose egg. The collateral circulation consisted probably of the anastomosing lumbar, circumflex and lower intercostals, with some assistance from the pudics, inferior hæmorrhoidals, and sacral arteries. Any resort to a treatment by prolonged compression of the aorta, or extension of the operation by employing the sac, was forbidden by the precarious state of the patient.

NOTE ON THE NEWLY RECOGNIZED SUGAR CONTROLLING FUNCTIONS OF THE SUPRARENAL GLANDS.

DR. C. A. HERTER, of New York, has published in the *Medical News* a preliminary paper on the relation between the suprarenal glands and the production of sugar in the body. Previous records which are referred to at the beginning of the article,go to show that extracts of the suprarenal gland,injected within the peritoneal cavity of dogs,giverise very regularly to the presence of considerable amounts of glucose in the urine. Also that solutions containing the substance known as adrenalin act especially, and, probably exclusively, upon the pancreas by imparting to its cells a stimulus which in some way brings about an increased conversion of hepatic glucose into sugar. Experiments by the author strongly suggest that this disturbance in metabolism is dependent upon interference with the oxidative activities of the cells of the pancreatic gland, rather than being comparable to an excision of the organ. Consequently we have some grounds for believing that the organism possesses a hitherto undiscovered mechanism by which sugar metabolism is largely controlled under physiological conditions. It seems natural to suppose that if relatively large applications of adrenalin to the pancreas call forth temporary glycosuria, slighter influences of the same sort may serve as a continuous but variable physiological stimulus to the pancreas, to call forth the sugar that is constantly required by all the cells in which metabolism is active. This hypothesis has been put to the experimental test, and results have been obtained which establish thesugar-controlling influence

of the suprarenal gland. For example, massage of one or both suprarenal glands is followed by glycosuria, while the removal of the suprarenal glands, or ligature of their vessels, is followed by a rapid decline in the sugar of the blood. These experiments, full details of which have yet to be published, do not by any means imply that with the removal of the suprarenal gland the organism wholly loses its ability to make sugar, for this has frequently been disproved by excision of the glands in dogs. In regard to the excretion of sugar, after total extirpation of the pancreas preceded by exclusion of the suprarenal glands, experiments seem to indicate that the organism excretes less sugar after elimination of the combined pancreatic and suprarenal functions, than after the elimination of the pancreatic functions alone.

The question as to whether codeine represses human glycosuria by acting upon the suprarenal gland or not, is also briefly discussed, but at present the author declines to draw any conclusions in regard to this matter, but expects to publish more definite results shortly.

THE USES OF RUBBER TISSUE IN THE OPERATION FOR TIC DOLOREUX.

In *The Annals of Surgery* for January, Abbe of New York outlines a method of operation for tic doloreux, which in his opinion, while obviating the necessity for the removal of the gasserion ganglion secures a satisfactory result. Operation for the removal of less than the ganglion have hereto been followed by a recurrence of the symptoms within a varying time, due to a regeneration of the nerve tracts in which recent investigation shows the growth to take place from the distal as well as from the proximat divided end. The Hartley operation is efficient as a preventive of recurrence, but is attended by such dangers and difficulties as render it only a last resort. Turk gives a resumè of 201 cases of which 83 per cent. survived the operation and 77.6 per cent. could be regarded as permanently cured, while a number of the fatal cases showed death to be due to injury attendant on the manipulation of the brain substance.

Abbe suggests the interposition of a piece of sterile rubber tissue under the ganglion over the foramina of exit of the second and third nerves after these have been divided and by rotation evulsed from the ganglion with removal of one-half inch of the nerves. The method of exposing the nerves is similar to that of the Hartley intercranial opera-

tion. He believes from microscopical evidence that the seat of the pathological changes is chiefly in the nerves themselves, and has found that the rubber tissue remains in position, and maintaining its integrity serves as an effectual barrier to the re-establishment of the nerve tract and a satisfactory non-conducting medium. The clinical evidence offered is five cases of which one dates over six years, one five years, one two and one-half years, one one and three-quarter years and one six months without recurrance of the symptoms.

THE NEW RELIGIO MEDICI.

With the above as a text, Sir Frederick Treves preached an admirable sermon in his address delivered at the opening of University College, Liverpool. In his comparison of the Religio Medici of Sir Thomas Browne, with the modern Religio Medici, he states, that in the former there is much which is personal to the man who wrote it, there is a little which would be unacceptable to the modern physician; but there remains a not inconsiderable part which rests upon unchangeable foundations and which is beyond criticism. The elements of that creed would appear to concern themselves with two great issues, with the general attitude of the medical man towards disease, and with his particular attitude towards the sick whom he will profess to treat.

In the days of Sir Thomas Browne, a conception of disease was current which still influences the minds of many, namely, that disease was the outcome of an influence which was outside the body and quite distinct from it, there being nothing natural in any of its processes and nothing beneficent in any of its manifestations. The physician of to-day cannot include this conception among the articles of his faith. The time has come when it would rather appear that many of the so-called symptoms of disease are expressions of a natural effort towards cure, that they are not malign in their intent but that they have for their end the ridding of the body of the very troubles which they are supposed to represent. It would seem therefore that the creed of the physician should render his attitude towards disease the opposite to that which was current when Sir Thomas Browne wrote his thesis

The second great element in the Religio Medici concerns the relation of the physician to his patient, and here there is probably but little divergence between the old faith and the new, the principles which should guide a medical man in his conduct towards his patients being

few and simple. In the first place he who adopts the profession of medicine should be strong. Not with the strength of crude force, but with that excellent power which depends upon a fine and cultivated sense, a quick perception, a ready judgment, and a delicate susceptibility.

The second need in the equipment of the medical man is absolute fidelity. All those who profess to attend upon the sick undertake a solemn trust which needs to be observed with punctilious care. In accepting this trust, every physician takes upon himself a grave responsibility, and he who is the most exact in the right observance of this confidence has the greatest claim to be worthy of his calling.

The third article in such part of the Religio Medici as bears upon the qualifications of the physician is this—he must be kind. In the mere treatment of the sick a simple kindliness of the heart is an essential factor and it can never be replaced by an assumption of manner however elaborate, or however precisely mimicked.

In concluding, the lecturer recommended those about to enter upon the arduous career of medicine to keep this motto before their eyes; *fortiter, fideliter, feliciter.*

FOR NASAL CATARRH (Externally).

℞ Betul-ol (Methyl-Oleo-Salicylate Co.) - - Min. 10
Acid. Oleici - - - - - - - ʒi
Ol Amydal. Dulc. - - - - - - ʒii
Salol - - - - - - - - - gr, 10
Sig. To be used as spray.

FOR NASAL CATARRH (Internally).

℞ Quinine Glycero-phosph. pur - - - - gr. 1/2
Eucalyptoli Benzoatis - - - - - - min. 1
Creosoti Benzoatis - - - - - - min. 1
Misce fiat sec. artem. (dispense in capsule).

This prescription is sold under the registered name " Kugloids.',

Benzoate of Creosoate is tasteless and does not irritate the stomach, besides being free from all the untoward effects of other creosote preparations.

These capsules are a specific in influenza when administered in the first stage, before the buccal cavity and bronchial tubes become infected.

ELECTRIC LIGHT IN DISEASES OF THE RESPIRATORY ORGANS.

FREUDENTHAL had been using, for some time, electric light in the treatment of both laryngeal and pulmonary tuberculosis. In the *Laryngoscope*, in an abstract of a paper on this topic, Freudenthal says "though he has never cured an advanced case by this means, the treatment was of value just as is the use of morphine, heroin, or hydrotherapy; indeed, the electric light treatment stood on the same level as hydrotherapy, but was superior to the latter, because it relieved pain and facilitated expectation."

ETIOLOGY OF TUBERCULOSIS.

Dr. Arthur Latham, in the November number of the Edinbugh Medical Journal, makes the following statement in his article :—

Hereditary tuberculosis is so rare as to be a negligible factor. It is not proved that tuberculous patients hand down to their children tissues which are especially receptive to tuberculosis. Tuberculosis always results from a pre-existing case of the disease, and the bacilli are conveyed by the mouth-spray, by the expectoration, or other discharge, and by means of food-stuffs, more especially milk. It is improbable that infection often takes place from air respired through the nasal passages. The tubercle bacilli, whether the infection is through the air or the food, enter the new host by the mouth in the majority of cases. The bacilli may then be destroyed by the natural defensive actions of the body in the respiratory and alimentary tracts, or they may pass into the various parts of the body.

FOR CANCER RESEARCH.

Mr. T. Sutton Timmis, of Liverpool, has given a donation of about $50,000 for the purpose of instituting systematic investigations into the origin and cure of cancer. The investigations will be carried on at the Liverpool Royal Infirmary and the new laboratories of experimental medicine in the Univesity College in Liverpool.—*American Medicine.*

DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville,
Fellow of the British Laryngological Rhinological, and Otological Society.

HYDROTHERAPHY IN DISEASES OF THE EYE.

THE employment of hydrotherapeutic measures in the treatment of diseases of the eye is briefly considered by W. O. Nance, in the *Med. Standard* and abstracted in the *Journal A.M.A.*

(1) Heat and cold are best applied to the eyes by means of moist pads, which are more efficacious when employed in this manner than by means of the coil, or bladder, in that their action is more penetrating, and their effect is more germicidal.

(2) The application of *heat* is indicated in degenerative corneal processes—intestinal and phyctenular keratitis, corneal ulcers, pannus, infected corneal wounds, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the lids (black eye) to hasten the absorption of extravasated blood.

(3) The application should be of the highest temperature the patient can endure (110-135) for a period of fifteen minutes, and repeated at intervals of two or three hours for several hours.

(4) *Cold* is indicated in hyperemia and inflammation of the conjuntiva. In purulent conjunctivitis it is the remedy par excellence. In traumatisms, especially those of the iris and lens, and in the early treatment of contusions of the lids its employment is of value.

(5) In purulent conjunctivitis iced applications may be continuously used for many hours—as long as the cornea remains unimpaired, in which instance they are positively contraindicated.

(6) Hot applications greatly assist the rapid absorption of the various medicaments employed in ophthalmic practice, and when used for this purpose should immediately precede the instillations of such solutions.

FOREIGN BODIES IN THE MAXILLARY ANTRUM.

DR. JOHN MACINTYRE, F. R. C. S., at the March meeting of the British Laryngological Society (*Jour. Laryngology*), showed an X-ray photograph of a tube in the left maxillary antrum and also the tube which had been taken out by the operation through the canine fossa. The tube had a soldered flange to prevent its slipping up, but

the flange became loosened, which Macintyre considered good reason for insisting on the use of gold tubes with the lower end beaten out so as to form a rim. The reviewer recently treated a suppurating maxillary antrum by alveolar route, and, though the patient has cured her other antrum by this means, she accidently forced the tube a short way upwards, and her husband, in trying to pull it down, shoved it into the antrum, necessitating extraction by the canine fossa.

INTRA-NASAL SURGICAL PROCEEDURES IN CHRONIC NONSUPPURATING MIDDLE EAR DISEASE.

AT the last meeting of the British Medical Association, P. McBride F. R. C. P., introduced the discussion on this question. (*Jour Laryngology*). He says: (1) Adenoids should be treated in all cases of catarrhal middle ear disease. The same is true of naso-pharyngeal catarrh. (2) In affections of the anterior nares and pharynx, *operative treatment should only be employed, if it is indicated on rhinological and laryngological grounds apart from the aural condition.*

McBride thinks, and quite rightly too, that there is altogether too much operating in the nose for aural troubles. In sclerotic middle ear trouble, where the membranæ tympani is not in drain and is usually normal, in appearance. Since anything which disturbs the general tone, loss of blood, fatigue, shock, etc., increases the deafness, he insists that no operative measures on the nose or naso-pharnyx should be attempted. Mr. McBride argues with Sir Felix Semon that *marked nasal obstruction very rarely causes deafness.* Therefore, while justifying nasal operations in patients with middle ear catarrh, he insists the obstruction in the nose must be of sufficient importance to give the patient *discomfort* referred to the nose. He challenges any one to adduce cases, *which have been closely observed,* proving that nasal operations as distinguished from naso-pharyngeal, *per se,* produced benefit. He does not refer to acute middle ear catarrh, but to chronic deafness, due either to advanced catarrh or to sclerosis.

REFUSAL TO CHARTER AN "OPTICAL COLLEGE."

THE refusal of the authorities in Philadelphia to grant a charter to a proposed "optical college" with a curriculum of two months is, it strikes us, not only a step in the right direction, but a gigantic stride forwards. At all events it shows in this case that the angels do not always fear to tread even on the toes of the by no means fools who are

naturally anxious to rush in, and it will also serve as a protection to one of the specialities that is much in need of it. For years ophthalmology has been the favorite and profitable field for the charlatan and empiric, and to such a degree has it been worked by unscrupulous and advertising quacks that the simple and easily-understood appellation of "oculist" has grown into a term of reproach, and has become an indication of such ethical irregularity that its use by members of the National Society has been forbidden by its constitution.—*Medical News.*

OCCURRENCE OF SYMPTOMS IN TABES.

Byrom Bramwell, *Brain, Spring* 1902, abstracted in *Medical Review of Reviews*, in an analysis of 155 cases of tabes, found the first symptoms noted were lightning pains in 52%; diplopia and ataxia, each 8%; loss of vision, 5%; loss of knee jerks, 81%; paralysis, other than ocular, 10%; inequality of pupils, 38%; Argyle Robinson pupil in 69%; optic atrophy in 21%.

OCULAR DEFECTS AND WRY NECK.

AMBROSE Ranney, in the *New York Medical Journal*, for October 25, 1902, draws attention to the relationship between wry neck and ocular defects. Two very interesting cases are cited where recoveries, from apparently helpless conditions, followed the correction of the refractive errors. The deductions he draws are as follows:

(1) That "eye strain" can cause, and its relief can cure wry neck.

(2) That no case is scientifically investigated until both the eyes and the eye muscles are properly examined by modern instruments of precision and modern methods.

(3) That graduated tenotomies upon the eye muscles are a positive step for the relief of reflex symptoms, produced by maladjustment of those muscles. These operations are painless, require no surgical dressings, entail no confinement to bed, and produce immediate results.

(4) That the condition of wry neck should be regarded as a *pure neurosis* in most instances; hence the determination of its existing cause is vitally important.

(5) That all mechanical treatments of wry neck are but palliative; and apparatuses designed to aid in maintaining the normal head posture are neither ornamental nor curative.

ACETOZONE IN SUPPURATIVE CORNEAL LESIONS.

KLINEDNIST, in *Journal of Eye, Ear and Throat Diseases*, writes very favorably of acetozone in suppurative corneal lesions. A solution of one grain in two fluid ounces of distilled water is used. A sharp, burning pain follows for a few seconds.

TREATMENT OF HÆMORRHAGE IN OPERATIONS ON THE TONSILS.

ESCAT (*Reprint La Presse Medicale*, August, 1902), has been successful in arresting hæmmorrhage after removal of the tonsil, both primary and secondary, by suturing the anterior and posterior pillars together with a curved needle. Should this prove insufficient, he introduces a wad of cotton, the shape and size of the little finger, working it beneath the two stitches in the pillars. The cotton can be impregnated with suprarenal extract, hydrogen dioxide, or a 10 per cent. solution of antipyrin, or a two per cent solution of ferropyrin. If adrenalin hydrochlorate is used, the 1 in 5,000 solution is strong enough. The tampon should be removed at the end of 24 hours; the sutures may be left longer. If severe hæmmorrhage continues, he advises tamponment of the pharynx before resorting to ligation of the carotid. This consists in intubation of the larynx and œsaphagus, and packing the pharynx, *en masse*, with gauze around the tubes.—*Jour. Eye, Ear and Throat Diseases.*

THE CAUSE, SYMPTOMS AND TREATMENT OF MASTOIDITIS.

DR. PHILIP HAMMOND, in *American Medicine* (April 12, 1902), says o' mastoiditis :—

(1) Mastoiditis is always subsequent to purulent inflammation of the middle ear.

(2) Tenderness of the bone is an important symptom when present; but the mastoid may be full of pus, with absolutely no tenderness.

(3) Bulging of the posterior superior wall of the canal is a most important symptom. When the bulging is next the drumhead, it is pathognomonic.

(4) Absence of temperature is no guide whatever.

(5) Improvement in hearing is usually indicative of subsiding inflammation in the middle ear.

(6) The operative treatment is comparatively safe, while delay is dangerous.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

At the annual meeting of the Protestant Hospital for the Insane, Verdun, a very important discussion was carried on concerning the necessity for greater care of the tubercular patients at the asylum. In presenting his report, Dr. Burgess, the superintendent, stated that the admissions to the hospital consisted of 64 private and 75 public patients. Of these 53 per cent. were classified as incurable from the outset. Eighty-three patients were discharged during the year, 53 of them being registered as recovered, 20 as improved, and 10 as unimproved, making a discharge rate of 59.71 per cent. and a recovery rate of 38.18 per cent. Of the thirty-eight fatal cases recorded for the year, nine were due to pulmonary tuberculosis. He noticed, as the hospital grew older, that more and more cases of tuberculosis developed, and no less than 23 68 per cent. of the deaths last year were due to this cause. It therefore become a grave question as to what should be done to isolate cases of this character, since isolation and the open-air treatment seemed to be the only successful means of combatting the disease. The proper solution of the problem was undoubtedly to be found in the provision of a separate isolated building for tubercular patients only, one portion of the structure being set apart for suspected cases, another for those in whom the presence of the malady in an active state has been positively established. Pending the erection of a proper hospital it was his intention during the coming summer to test the merits of the tent system for the isolation of cases of tuberculosis. A review of the work done at the Royal Victoria Hospital was presented at the annual meeting of the governors held towards the end of January. The superintendent's report showed that the number of patients admitted during the year was 2,814, an increase of 235 over the previous year.. Of these 1,544 were free patients, 807 public ward patients paying fifty cents per day, and 463 private ward patients; 2,074 were residents of Montreal and 740 came from districts outside the city, while the average number of days' stay in the hospital per patient was 26.13. The death rate for the year was 4.62 per cent., or if those dying within forty-eight hours after admission be deducted, 3.62 per cent.

In the out-door department the total number of visits aggregated 21,950, of these 9,381 were medical; 4,514 surgical; 3,393 eye and ear; 3,370 nose and throat; 1,292 diseases of women.

During the year the pavilion for the isolation of infectious cases breaking out in the wards has been completed, also a medical electrical department has been added to the hospital, fully equipped with the most approved appliances for the taking of skiagraphs and the treatment of patients, and has already proved of great assistance in the work of the hospital. The changes and additions in connection with the heating and electric lighting of the buildings have been completed and the hospital now possesses a power plant of great efficiency and economy with ample provision for possible contingencies. An extension at the rear of the present operating theatre is in course of erection. It will contain a gynæcological theatre and a small operating room for special cases, with preparation and recovery rooms, and when these are completed the present operating theatre will be remodelled, as it is not considered satisfactory in its present condition. The extra accommodation is much needed, the present operating facilities being inadequate for the surgical requirements, for last year there were 1,310 operations in the large theatre and 811 in the laryngological and ophthalmological operating room.

The following appointments were made to the Externe Medical Staff for the year ending December 31st, 1903: Director of the clinical laboratory, Dr. A. A. Bruere; clinical assistants in medicine, Drs. F. M. Fry and H. B. Cushing; clinical assistants in surgery, Drs. E. W. Archibald and C. B. Keenan; clinical assistants in neurology, Drs. A. Shirres and A. A. Robertson; clinical assistant in ophthalmology, Dr. F. W. Harvey; clinical assistant in laryngology, Dr. W. H. Jamieson; assistant in bacteriology, Dr. A. B. Yates; assistant in clinical laboratory, Dr. F. B. Jones; medical registrar, Dr. H. B. Cushing.

The annual banquet of the Societé Medicale was held on January 26th at the Place Viger Hotel, the attendance being even larger than last year. Dr. Dube, the president, opened the toast list by proposing "The King." Dr. Lachapelle proposed "Our Guests" in an eloquent speech which was first replied to by the Minister of Marine and Fisheries. Mr. Prefontaine, who was loudly cheered, referred to the medical profession as promoters of charity, of science, and of patriotism, and also dwelt on the fact that in the past young doctors had to go to the United States in order to make a name for themselves and to earn a living. He believed that this time had now past and that our rapidly growing country offered every inducement for her sons to remain at home rather than to cast in their lot with a foreign nation.

Hon. Mr. Gouin was also well received and delivered a speech of more than ordinary interest. He asked the medical profession to instruct the legislators as to the wisdom of allowing the children of this province to enter factories at twelve years of age. He said that this was not allowed in England, Germany, or France, and he thought it was a matter in which the medical fraternity should play an important part.

Hon. Dr. Guerin also made a stirring and humorous speech. He was followed by Dr. T. W. Campbell, Dr. Starkey, Dr. Brochn, Dr. Lachapelle and others, concluding a most successful function which was characterized throughout by bright, witty, yet thoughtful, speeches.

Dr. T. A. Starkey, the recently appointed professor of hygiene, delivered the annual lecture of McGill University on January 22nd, the subject being "Public Health." Principal Peterson was in the chair, and in introducing the lecturer, he spoke of the great loss the University had sustained in the death of Dr. Wyatt Johnson, but believed that in Dr. Starkey the Medical Faculty had found a worthy successor.

After a lengthy and eloquent testimony to the character and originality of Dr. Johnson, Professor Starkey went on to show the very great importance of the study of hygiene, viewed both from the position of the general public and of the medical practitioner. Examples illustrating his points were drawn chiefly from a varied experience among the natives of India.

The greater part of the address, which was essentially of a popular nature as suited to an audience drawn from all the faculties of the University, treated of the gradual spread of hygienic doctrines and practice among the general public, with the consequent amelioration of suffering and suppression of disease.

The following cases were among those reported at the Montreal Medico Chirurgical Society during the past month.

Drs. H. S. Shaw and W. F. Hamilton presented a pathological specimen showing congenital heart disease. The child from whom the heart was obtained had reached the age of twelve years when death occured. At birth it appeared to be quite normal, but when one week old while being tossed in the air by its father, it suddenly became slightly cyanosed and remained in this condition for two years and a half, when, after a severe attack of whooping cough, the cyanosis became suddenly and markedly increased. She remained in this condition until the day of her death, never being capable of anything more than the slighest exertion without marked dyspnoea and prostration.

The final illness was rather sudden, with some signs of meningitis—pain in the neck, high temperature, stupor, loss of vision, Kernig's sign, with

final sudden loss of consciousness. An autopsy was permitted only on the thorax, consequently the diagnosis of meningitis could not be confirmed. The heart was hypertrophied with a large aorta, and both ventricles extended into the apex, which was round rather than pointed, also the right ventricle was much hypertrophied and the right auricle dilated, the interventricular septum being deficient and the foramen ovale patent. There was a marked stenosis of the pulmonary artery, with signs of a chronic endocarditis, while only two cusps of the valve could be made out, and a small probe completely filled the lumen of the vessel. Dr. Hamilton suggested that a poorly developed septum had been present until the onset of the whooping cough, and that great exertion and strain during the fits of coughing had ruptured the delicate membrane, with the subsequent cyanosis and dyspnoea on slight exertion.

Dr. Lockhart showed a calcified foetus, removed from a woman, who had been treated for ectopic gestation some seventeen years before by killing the foetus with electricity. The "electrocution" had been successfully accomplished, but about nine years after the operation the patient began to complain of pain in the region of McBurney's point, which gradually became so severe that she consented to operation, with the result that a perfectly calcified foetus apparently of the fifth or sixth month was removed with consequent relief of all the symptoms.

Dr. Bazin read the report of a case of duodenal ulcer following a severe burn. The patient, who was about three years old, had received a severe scald involving the thorax and upper extremities, and under ordinary local treatment the case did well until the third day, when vomiting followed by diarrhœa set in. This was checked and by the eighth day the patient was feeling well but appeared to be restless, however, in a few days this passed off, and on the thirteenth day the child was so bright that there was some idea of sending it at once to the hospital for skin-grafting. On the fourteenth day the child suddenly had a chill and began to vomit large quantities of bright red blood and before a doctor could be called expired. The autopsy revealed a large punched-out duodenal ulcer from which the haemorrhage had arisen. Dr. Bazin found on examining the records of the Montreal Hospitals that there were only two cases reported which were at all similar, and after an extensive search in the literature on the subject, discovered that although the fact of the occurrence of such lesions had been passed on from one book to another, yet very few definite examples of the condition had been reported.

UNIVERSITIES AND COLLEGES.

MANITOBA MEDICAL COLLEGE, WINNIPEG.

THIS college was founded in 1883. It is in affiliation with the University of Manitoba ; and has a staff of twenty professors, or lecturers. There are about 100 students in attendance on lectures.

The Hospital fees are in the Winnipeg General Hospital, $10 per session, and the payment of a further sum of $10 at the beginning of the next session will entitle the student to a perpetual ticket. The Maternity Hospital ticket is $6.

The College fees are $5 for registration, and a total of $400 for the four years, payable annually $100. Arts' Graduates, taking their course in three years, are required to pay $130 each year.

The University fees are for supplemental examinations, each subject, $5 ; Matriculation, $5 ; Ad Eundem Statum, $5 ; each regular examination, $4 ; degree of M.D., $10 ; degree of C.M., $15.

The following College regulations are enforced : Students who wish to take a course of lectures over again may do so on payment of $10. On entering college students must deposit $5, to pay for any damage to the building or contents ; but, if not required, this is returned.

No student can register or attend lectures until he has passed the matriculation examination. First year students must pay one-quarter of sessional fee at time of registration, and all fees must be paid by 1st December. No student can register after 15th November.

Clinical teaching is given in the Winnipeg General Hospital, which has now 215 beds. Every opportunity is also afforded the students to avail themselves of the clinical material in St. Boniface, which has 200 beds.

Scholarships are awarded by the University as follows : First year, two of $80 and $50 respectively ; Second year, $80, and $50, and third year, $80 and $50. A silver medal is awarded the student taking the highest standing in the M.D. examination, and and a bronze medal to the student taking the second places. Dr. John H.O'Donnell offers a medal to the student taking the highest standing in Sanitary Science.

The requirements for the degree of M.D. are that the person is a bachelor or doctor of medicine of some University in His Majesty's Dom-

inions when he may be admitted ad eundem gradum ; or passes the matriculation examination, and thereafter complies with the regulations of study and passes the four annual examinations laid down in the professional course. The University accepts in lieu of the Medical Matriculation, the matriculation examinations of the Medical Councils of Quebec and Ontario; the certificate of the Medical Council of Great Britain, the 2nd Class Teachers's Certificate of Manitoba, Ontario or the N. W. T.; the Ontario Intermediate or Junior Leaving, with Latin and Natural Sciences, bachelors of Arts of any University in His Majesty's Dominions ; or the Arts Matriculation or first year's examination of Manitoba University.

The subjects for the Medical Matriculation are: Latin, Henderson and Fletcher, pages 1-191, together with Viri Romani, Ginn & Co., translation of prescribed authors, and sight translation; Arithmetic, Algebra, simple rules, factoring, H.C M., L.C.M., square root, fractions, equations of one, two, and three unknown quantities, indices, surds, quadratic equations of one and two unknown quantities; Euclid, books I., II , III. ; English Rhetoric and Composition, and Poetical Literature as per prescribed authors, Scott, Coleridge, Wordsworth ; History, Green's English and Clement's Canadian ; Sciences, the High School Botany and Physics.

The professional Course consists of four years, with the annual Examination. Graduates in Arts can complete their Course in three sessions. Each session is of eight months' duration.

The first year's course consists of at least 75 lectures in Anatomy, Practical Anatomy, Physiology, 60 on Inorganic Chemistry, and 25 of two hours each on Histology. He shall satisfy the Examiners on the Anatomy of the bones, muscles, and ligaments, Practical Anatomy to the same extent, the Physiology of digestion, circulation and respiration, the full course of Inorganic Chemistry and of Histology.

The second year's Course shall consist of not less than 75 lectures on Anatomy, Practical Anatomy, Physiology, materia medica and therapeutics, 40 lectures on Practical Chemistry, mainly medical, 40 lectures on Organic Chemistry. Two full dissections of the body are required. He shall pass an Examination on all of the above subjects except Therapeutics.

The third year's Course shall cover 75 lectures on Materia Medica and Therapeutics, 40 lectures on Surgical Anatony, Medical Jurisprudence, 25 lectures on Pathology, of two hours each, and 30 lectures on Sanitary Science. He shall satisfy the Examiners on each of these subjects.

The fourth year's Course is made up of 75 lectures on Medicine, Surgery, Obstetrics and Diseases of Children, two Courses of 100 each on

Clinical Medicine and Clinical Surgery, and two Courses of 50 lectures each on Gynæcology. He shall pass an Examination on each of the above.

For the degree of C.M. the candidate is required to pass in Operative Surgery, and write a thesis in presence of the examiners. 75 per cent. is required.

A student may enter ad eundum statum, but no student shall be admitted to the fourth year examination from another University until he attends a full eight months' course in some College in Manitoba, affiliated with the University of Manitoba, taking out all the fourth year tickets.

Fifty per cent. of the marks in each subject shall be required to satisfy the examiners.

DALHOUSIE UNIVERSITY MEDICAL FACULTY.

THE Medical Faculty of Dalhousie University, Halifax, consists of twenty-five professors, lecturers, and examiners. The University provides instruction on Chemistry, Botany, Zoology, and Medical Physics There are at present about 100 students in attendance.

The following fees are imposed: For Matriculation, $10; a supplemental in any medical subject, $5; a special examination, $5; for one of the affiliated courses, $5; for registration, $2; Junior Chemistry and laboratory, $10; Senior Chemistry and laboratory, $12; Botany and Zoology, $12; Physics, $6; Graduation, $30; Gymnasium, $1.50. If $30 have been, or part paid, in examinations, to this extent the graduation fee is reduced.

The clinical instruction is given at the Victoria General Hospital, or some other hospital recognized by the Senate. Students must obtain eighteen months hospital experience, or twelve months in a hospital and six months in a dispensary or out-patient department, before going up for the final part of the M.D., C.M. examination.

A medal is awarded by the Faculty to the student who stands first at the final M.D., C.M. examination.

A prize of books is offered by Dr. Lindsay to the student who stands first at the second part of the Primary Examination.

The Simson prize of $25 is awarded to the student who stands first, at the end of the third year, on Chemistry, Practical Chemistry, Materia Medica and Therapeutics.

The University of Dalhousie grants the degrees of M.D., C.M.; but neither degree is conferred on any person who does not at the same time obtain the other. The academic course consists of a matriculation exam-

ination; a Primary Examination, divided into two parts; and a final examination also divided into two parts. The profession course covers four winter sessions of eight months duration each.

The student before entering upon his professional studies, must pass the University Junior Matriculation with latin, or the Preliminary Examination of the Provincial Medical Board, or some examination recognized by the Board as sufficient. He must be sixteen years of age before passing this Preliminary Examination, and thereafter spend at least four years in the study of the professional course. At all examinations a minimum of 50 per cent will be required on each subject for a pass, and 75 per cent to pass with distinction.

The first part of the Primary Examination includes Anatomy, Chemistry. Botany, Zoology, and Medical Physics; and is written and practical as required by the subjects. The candidate must be a matriculant and have attended at Dalhousie College, or some recognized college, during a session of eight months, at least 75 lectures and demonstrations on anatomy with 10 hours laboratory work per week for six months; 75 lectures on Chemistry with a laboratory course of not less than three hours per week for six months; 100 hours of lectures and laboratory work on Botany and Zoology; and 50 lectures on Medical Physics.

The second part of the Primary Examination includes Anatomy, Physiology and Histology, and Chemistry as follows: A written and oral examination on descriptive, regional, surgical, and medical anatomy; a written and oral examination on Physiology and Histology with microscopic preparations; a written examination on Chemistry, a practical examination in the laboratory, and an oral examination on the entire course of junior and senior work. Students must furnish proof of having complied with the preliminary requirements two academic years previously; of having passed the first part of the Primary Examination; and of having attended at least 75 lectures and demonstrations on Senior Anatomy with 10 hours laboratory work per week for six months; 75 lectures with not less than 3 hours per week in the laboratory for six months on Senior Organic and Medical Chemistry; 75 lectures on Physiology; and 75 lectures with laboratory work on Histology.

By special permission the first and second parts may be completed at one time.

The Final M.D., C.M. examination is also divided into two parts.

The first part, or examination includes Materia Medica, Pharmacy, and Therapeutics; Pathology and Bacteriology; Medical Jurisprudence and Insanity, and Hygiene. These examinations are written and oral, The student must have passed the preliminary, or its equivalent, at least

three academic years previously; of having passed the two parts of the primary examination, at Dalhousie College, at some recognized university or college; of having, after passing the primary examination, attended at some recognized college, at least one session of eight months, the following courses: Materia Medica, 75 lectures; Therapeutics, 25 lectures; Medical Jurisprudence and Insanity, 50 lectures and demonstrations; Hygiene, 25 lectures and demonstrations; Pathology and Bacteriology, 150 hours of lectures, demonstrations and laboratory work; and Practical Dispensing, 30 lessons, or three months with a druggist or dispensing physician.

The second part of the final examination includes Surgery, Clinical Surgery, Medicine, Clinical Medicine, Obstetrics and Diseases of Women and Children. The examinations on these subjects are partly written, oral, and practical as indicated, and cover urinary examinations, making clinical records, diagnosing diseases, the use of surgical appliances, the anatomy, physology, pathology, and hygiene of pregnancy, etc. Candidates must show that they are 21 years of age, that they have passed all the former examinations, that they passed the primary examination either at Dalhousie University or at some accepted college, that they have attended two courses of 75 lectures on Surgery, Medicine, Obstetrics and Diseases of Women and Children, Clinical Surgery, Clinical Medicine, one course of 25 lectures on Diseases of the Eye, Ear and Throat, a course of operative surgery and performed operations on the cadaver, served for six months as surgical and six months as clerk in the medical wards, and reported at least 10 surgical and 10 medical cases, attend 4 cases of midwifery, and practical instructions in the making of post mortem examinations, and the performance of vaccination.

LONDON MEDICAL COLLEGE.

At last it looks as if the trouble between the Medical School and the Victoria Hospital, is in a fair way to be settled, or at least disposed of. The School has practically completed arrangements whereby there will be from twenty to thirty free beds up at St. Joseph's and an ampitheatre erected for the holding of lectures. This, with what they now have from the Board of Hospital Trustees at Victoria, will give the students ample clinical material to keep them going. It would be a great mistake on the part of the hospital authorities to place any obstacles in the way of clinical teaching.

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EDITORIAL.

COMPULSORY VACCINATION.

The Provincial Board of Health has under consideration some amendments to the present law that would make vaccination compulsory. Vaccination should be made absolutely compulsory during the first year of the child's life, and re-vaccination just as compulsory at the age of say 14 or 15 years. Not one moment nor one word should be wasted upon antivaccinationists. They are hopelessly in error, and no argument will change their darkness to light. They are wedded to their idols. Evidence of the most convincing character has already been laid before them, but without avail. They prefer the darkness to the light; but it will never do to allow their erroneous views to become a menace to the public health. Children are taken from the custody of an insane parent. In like manner, the children of an antivaccinationist should be vaccinated under the compulsion of the law, because such a parent is not in a proper frame of mind to judge what is best for them, and consequently the State must take care of them in this vital matter. There should be absolutely no yielding in this matter.

Prior to the days of vaccination, smallpox was a regular visitor in epidemic form every few years. The children would be attacked by this scourge. In those days it was a children's disease. Between each epidemic a large number of children were born. These furnished material for a fresh outbreak of the disease. This is what those antivaccinationists would have us return to. At Berkeley, in Gloucestershire, on 17th May, 1749, was born into this world Edward Jenner, one of its great immortals. On the 26th January, 1823, he laid down his life, leaving vaccination behind him as his everlasting monument. Shall we keep that monument in a state of perfect repair, or shall we allow the antivaccinationist cranks and vandals of public health to deface or destroy it? In the name of Jenner, in the name of past epidemics, and the name of present and future generations, such must not be allowed to happen.

The proofs of the value of vaccination lie all around us; and are so evident that it might be thought one could read them while he ran.

but there are none so blind as those who do not wish to see. In Germany, where there is a strict vaccination and revaccination law, smallpox is unknown. In 1870, during the Franco-Prussian War, the German army lost from its ranks only a few hundred through smallpox; whereas the French army lost 23,000. In the former, vaccination was strictly enforced; in the latter, not. In cities in Britain where the antivaccination sentiment is strong, the disease is far more prevalent and fatal than it is in cities where vaccination is the rule. It has been proven beyond the shadow of a doubt that all the protection nurses, doctors, or other attendants require is efficient vaccination. The records of the Italian army for 20 years is an absolute answer to the antivaccinationist, and give all his arguments the lie.

Much has been said about the dangers of vaccination. They are as nothing compared with its advantages; and can be almost wholly avoided with care. A favorite argument with the antivaccinationist is the interference with one's freedom, and one's personal liberty. But this is like all the rest of their arguments, entirely wrong, and founded upon a wrong conception of liberty. The State is constantly interfering with personal liberty. The thief is committed to the jail, the insane to the asylum, the murderer is sent to the gallows, the plague-stricken to the pest-house, the drunkard to the cell, the deserting soldier to the lash. The whole social fabric is constructed upon the assumption that each one's liberty is restrained within certain bounds in order that all others may have certain rights assured them. We mutually agree to compel each other to pay taxes, to keep the peace, to defend ourselves against an enemy, to maintain the common health and safety of all. Here comes in the common right to interfere with the so-called personal liberty, and compel all to submit to vaccination in the common welfare of the State. Modern civilization and society could not exist for a single hour were it not for regulations, restrictions and compulsions. These are the sacrifices the individual must make for the State.

While we thus strongly approve of compulsory vaccination, we desire to express the opinion that the proposed Act should not direct affairs in such a way as to interfere with the fees of any qualified practitioner. Free vaccination should be furnished only for the destitute or pauper class. In no case should those who are able to pay find it possible to secure free vaccination. It should be made compulsory to obtain a certificate of successful vaccination. This would compel the vaccinated person to return to the vaccinator for inspection. It would be a great mistake on the part of the legislators and a gross injustice to the medical profession of Ontario to enact such legislation as would make free

vaccination general or possible for those who can pay, or who wish to select their own physician. There is always some opposition to compulsory vaccination, and it would remove much of this if the wishes of very many were respected in the matter of the choice of their physician, when such choice is desired by many. We would therefore insist that there be no interference with the fees of the profession, that free vaccination be refused those who are able to pay, and that those who so desire may choose their physicians. All this can be accomplished and maintain the efficiency of compulsory vaccination. We would urge on the members of the profession to see that their rights are protected.

AID FOR SCIENTIFIC MEDICAL TEACHING.

There are several subjects on the medical curriculum of every college that are essentially of a scientific character. Anatomy, physiology, pathology, bacteriology, and chemistry are such. To meet the requirements of the present state of knowledge, and the high standard of teaching exacted by the various examining bodies, it is no longer possible for the incumbents of these chairs to be engaged in active practice. They must give much time to the study of their subject, and to the experimental, laboratory, and dissecting room work, over and above the lectures in these departments, that they have but little time for anything else.

To expect, therefore, that the instructors in these branches shall do good work, and also follow the practice of their profession is to expect the impossible. These departments should be endowed, or placed on a salary basis of such amount as will enable the heads of these departments to live without worrying about patients and their fees. To do this requires money. This should be no serious obstacle. It will not do to fall back upon the State in all these instances; nor will it always be possible to secure the necessary aid from the general funds of the university with which the medical college may be affiliated. But there are other sources from which the assistance may be obtained.

There are many persons throughout the country of undoubted wealth. It ought to be possible to interest these in the work of scientific medical education. Such has been the experience elsewhere. There are many ways of using one's means for the purpose of perpetuating his name and good deeds, such as bequests to charities. It would be impossible to think of any way more useful, or praiseworthy than the endowment of a chair in physiology, pathology, anatomy, or bacteriology.

Here are the opportunities; and it is hoped the day is not far distant when there will be found those who will be willing to avail themselves of these opportunities of doing for their country, or locality, a truly noble work.

There is another source from which much assistance might come to our colleges. The graduates are now a numerous and influential body. One would think that it could be no great task for them to undertake to raise funds for the above purposes among themselves and their many friends. Could they be engaged in anything better? The college spirit should not die out of a man when he obtains his degree, and goes forth into the world of affairs. While he firmly sets his face to the future, he should ever recall the past. For the great duties of the future, many of his best inspirations will always come from his college days. A loved alma mater and a loving alumnus should ever go hand in hand. This work requires but a beginning. Disease is not the only thing that is contagious. To aid colleges by giving is one of the good things that can be made truly infectious. Giving requires a beginning, and others will follow in line. Let us hope that a commencement will be made soon.

For such purposes there is plenty of money. The question is bringing the claims of the scientific work of our medical colleges properly under the notice of those who can afford to give. This can be done. It has been done in many places and on many occasions. A few persons, as an informal committee, can collect money for a monument to Burns; a few others, in many cities, can erect monuments to Sir John A. Macdonald; others can take in hand the work of erecting memorials to our volunteers; several of the churches can raise million dollar funds. If the alumni of the various colleges would only bestir themselves, the money would begin to come for the endowment of scientific chairs in the medical colleges. Suppose the graduates of any college set themselves to endow the chair in pathology, we do not hesitate to state that within one year the task could be accomplished. The very fact that the graduates of any college undertook such a task would attract the attention of the wealthy, and induce them to give. This country is now old enough, has wealth enough, and colleges of worthy repute, to justify the turning of some thought to the creation of funds for the support of certain chairs, lectureships, and research scholarships. The high-class instruction given by the incumbents of these endowed chairs, who could devote their whole time to their special subjects, would be a great impetus to study throughout the entire profession. The profession and the public would alike gain.

THE TREATMENT OF PNEUMONIA.

A short time ago, Sir Dyce Duckworth delivered a lecture on the above subject at St. Bartholomews' Hospital. This lecture was published in the *British Medical Journal* for 15th November last. In his lecture attention was drawn to the change in treatment about 40 years ago, from the heroic to the more rational methods of rest and proper diet. Skoda and Dietl, in Vienna, Balfour and Bennett, in Edinburgh, and Todd, in London, were mainly instrumental in bringing about the change, with the effect that the death rate fell from 1 in 3 cases to 1 in 26, by adopting a supporting line of treatment. The type of the disease may vary from time to time, but the lecturer is of the opinion that the disease, on the whole is more severe now than it was when he began the study of medicine under Hughes Bennett. Pneumonia is an acute disease it is an inflammation of the lung, but it is something more. The disease is due to the influence of the toxin, generated by two or three specific microbes. He takes ill, but for a day or two there may be nothing noteworthy the matter with the lungs; but a flushed face, rapid breathing, a quick pulse, a high temperature, should make one think of pneumonia. The presence of consolidation, rusty sputum, and short cough make the diagnosis practically certain.

A warm bed and good nursing are essentials in the treatment of pneumonia. As there is a loss of appetite, these patients do on a fever diet consisting mainly of milk and beef tea. When the temperature does not rise above 103°, it is best left alone, as this amount of fever seems to be one way out of the disease. When the fever rises to 104°, 105°, or 106°, it must be reduced; and the best way to do this is sponging with iced-water and placing a cradle under the bed coverings. If these means fail, employ rubber tubing, circulating the ice-water round the head, and bags of ice in the axillae and beside the legs. Quinine may be given in doses of 5 grains every two, or three, or four hours till the fever gives way; but do not give antipyrin, antifibrin, or phenacetin. The use of the cold bath is condemned as a severe and exhausting process.

Among the internal medicines a saline mixture of potassium citrate and ammonium acetate is very useful by way of promoting the action of the skin and kidneys and quieting the circulation. Quinine in 2 or 3 grain doses is also a valuable remedy, and may be given in conjunction with the saline mixture. About the time of the crisis, on the sixth or seventh day, there may be profuse sweating and diarrhoea which should not be interfered with.

Sometimes the disease follows an arborative form and ends on the second, third, or fourth day by crisis. In other cases, the temperature

keeps high after the seventh day. This may be due to the very low condition of the patient, or to the existence of pleural effussion, most likely an empyaema.

In some cases of pneumonia, especially in those who have been drunkards, they become very delirious at night. In some other cases, insomnia is a prominent feature of the attacks. If the kidneys are sound, 15 minims of liquor morphinae, with 1 drachm of compound spirits of ether, is an excellent soporific. It may be repeated. These drugs sustain the heart while they procure sleep. Insomina at the period of crisis is particularly serious.

The care of the heart is of much importance, as the lungs become consolidated the strain on the heart increases. If both lungs are extensively involved, this may be so great that the heart becomes exhausted in the struggle. The blood cannot flow through the consolidated lung tissue, and is thrown back in the right side of the heart and the venous system. There may be extreme cyanosis and even jaundice, an unfavorable state of affairs. This condition may be relieved by a bleeding of 8 or 12 oz. If the heart begins to falter, oxygen is of value. This should not be delayed too long. The oxygen may be inhaled for ten minutes at intervals. Great relief to the failing heart may be given by the subcutaneous injection of liquor strychninae, 4 to 8 minims. This is of more value than digitalis. Another remedy of decided utility in the failing heart is musk. The doses usually given are too small. When it is required it should be given freely and is well worth the money. The old physicians used to give 9 to 12 grains in syrup and mucilage. With regard to alcohol, the following may be laid down as about the rule. In many cases stimulants are not required. The young do better in most cases without them. It the right side of the heart is engorged, the temperature high, the pulse rapid, and the first sound barely audible at the aortic area, some stimulants should be given, 2 to 4 oz. being usually enough, but 8 to 12 oz. may be required. It is always a matter of importance to give the patient as much water as he can drink.

To sum up. The treatment may be commenced by a mercurial purge. Then follow with a simple saline mixture with cinchona or quinine. The diet consists mainly of milk and beef-tea, and, above all, good nursing. Avoid a steam laden atmosphere. In the winter, poultices to the affected side, and, in summer, cotton wool sprinkled with spirits of camphor, do good. Relieve insomnia by morphia and Hoffmann's anodyne. Guard against heart failure with oxygen, strychnia, musk, and at times with stimulants, and a small venesection.

SIR JAMES GRANT'S JUBILEE.

Sir, James Grant, M. D., of Ottawa, celebrated, February 4th, his Jubilee in the medical profession. He entertained his medical friends with a smoker in St. Andrew's Hall. With few exceptions, almost the entire profession of Ottawa was present. The hall was beautifully decorated and the function was a very brilliant affair. Among the interesting events of the evening was a fine violin solo by Sir Frederick Borden, M. D. Sir. James Grant related many interesting anecdotes of his fifty years in the medical profession. Sir Frederick Borden spoke in high terms of Sir James Grant, and what he had done for the medical profession. The other numbers were: Piano duet, Drs. Prevost and Webster; song, James Dickinson; instrumental trio, Dr. Hanna and the Drs. Klotz; song, Dr. Robinson; piano solo, Dr. Gibson; instrumental solo, Dr. McKinnon; song, Dr. Chabot; song, Dr. Powell. Shortly before midnight all adjourned to the main hall, where dinner was served and the speech-making began.

Sir. James Grant was born in the county of Inverness, Scotland seventy-one years ago, but while very young was brought to Canada by his father, also a physician, and settled in Glengarry county His early education was received at Queen's University and at McGill College Montreal. When twenty-one years of age he graduated first in arts at Queen's and then in medicine at McGill in 1853. After graduating he came to Ottawa where he began practicing and where he has remained ever since. Twelve years ago he was knighted by the Queen in recognition of his services to the profession. In 1885 he was made vice-president of the International Medical Congress, which met at Washington. For the past twenty-five years he has been medical councellor for the province, and a number of years ago was made a fellow of the Royal Society of Physicians and Surgeons of Edinburgh and London. After half a century of labor he is yet hale and hearty and takes as keen an interest as ever in medical work.

ADDRESS OF THE COUNCIL OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

Sir. Frederick W. Borden, M.D., K.C.M.G.,—

We, the Council of the College of Physicians and Surgeons of Ontario, yesterday were pleased to enroll you as an honorary member of the College, the first and only one. Today we are further gratified on learning that our beloved King has been pleased to confer on you the

distinguished honor of Knight Commander of the Order of St. Michael and St. George, and we take the earliest occasion to send you, Lady Borden and family our warmest congratulations.

Every Canadian feels that you are entitled to this recognition, for if Canada, by her splendid services to the Empire at a critical period in the late war secured the deep and lasting gratitude of the Motherland, the admiration of civilization and inestimable advantages for herself, you stood foremost in the production of these great results as the Minister of Militia.

As Canadian citizens, we feel indebted to the energy, tact and vigilance that enabled you at a perilous and trying time to place at the disposal of the Empire an army of Canadians whose achievements in the field will ever be a pride and glory to Canada.

As representatives of the medical profession, we take particular pride in the fact that one of its members has so well directed the military affairs of this Dominion as to permit the organizing and placing on a permanent footing an army medical corps up to the highest standard, and endorsed by the war office, as is shown by its adopting your methods and apparatus. In this, every Canadian surgeon takes special pride.

Finally as our youngest member, we wish you God speed. Henceforth we will take more interest in your career, if that were possible, and we pray that you, Lady Borden and family, may enjoy for many year, honors so well deserved.

W. J. HUNTER EMORY, President. R. A. PAYNE, Registrar.

TORONTO, ONT., June 28th, 1902.

Sir Frederick, in a few well chosen remarks, thanked the Medical Council for their kindness, and said that no honor had ever been conferred upon him that he appreciated more. After which Lady Borden very handsomely entertained the representatives of the Medical Council.

The Honorary License and the above address were presented to Sir Frederick Borden, M. D., in his library, at Ottawa, on 24th January, by Sir James Grant, M. D., of Ottawa, and Dr. Moore, of Brockville, in very felicitous language

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THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION

The officers of the above association have sent out an appeal to the members of the medical profession to become members of the association. We can endorse the action of the officers. They deserve both praise and

encouragement for the work they are doing. The association was formed at the Winnipeg meeting of the Canadian Medical Association, 1901. The work of organization was continued at the Montreal meeting last September. We urge upon our readers to join the Protective Association. It can only be truly useful by being strong ; and it can only be strong to the extent of its membership. So do not put this matter off. remit your subscription to Dr. F. W. McKinnon, 70 Elgin st. Ottawa. In the short time the Protective Association has been in existence it has rendered excellent service to the profession. The best way to protect one's self is by assisting in the protection of others. Let us be one in this matter.

DR. J. H. RICHARDSON TESTIMONIAL

The former students of Dr. J. H. Richardson have undertaken to give him a banquet, and to present the University of Toronto with his portrait. Dr. Richardson merits this distinction, as he labored faithfully in the cause of medical education for half a century ; and no better anatomist ever addressed a class. We bespeak for the committee carrying out the arrangements every possible success. There will no doubt be a large and ready response from Dr. Richardson's old students. The subscription has been fixed at $5.00, including admission to the dinner, or $3.00 without the dinner ticket. The dinner and presentation are to take place in the week following Easter Sunday. The committee desires to hear from those intending to take part in the above function at least two weeks before it takes place. Communications should be addressed to Dr. John A. Amyot, Toronto.

THE CANADIAN MEDICAL ASSOCIATION.

We understand that arrangements are now actively under way for the next meeting of the Canadian Medical Association. Our London friends are busy at work forming committees, and laying out their plans. It is likely the meeting will be held about the end of August. We wish the executive much success.

PERSONAL.

Dr. and Mrs. Thompson, of Hamilton have returned from Clifton Springs.

Dr. Roberts, of New Germany, has sold his residence and removed to Galt.

Dr. W. H. Drummond was in Fredericton, N. B., in the early part of February.

Dr. Grey, of St. Thomas, who was ill, has recovered and resumed his practice.

Dr. Standish, a long resident of Wallaceburg, has sold his practice to Dr. A. Turner.

Dr. Lorne Gardiner has recovered from the effects of an operation for appendicitis.

Dr. Sylvester Snedden and Miss Jessie Rattray, of Pembroke, were married, 15th January.

Dr. W. J. Bell, of Toronto has taken the position of Surgeon to the R. M. S. Empress of Japan.

Dr. J. E. Lundy, Portage La Prairie, who was suffering with typhoid for some weeks, has recovered.

Dr. W. H. Carleton, of Arthur, has purchased the property and practice of Dr. Dame, of Thornhill.

Wm. Sinclair, M.D. has settled in Manitou. The doctor is an Honor Graduate of Manitoba University.

Dr. J. H. Wilson, of St. Thomas, is being frequently mentioned in connection with a vacant Senatorship

Dr. Oldright and his son, Dr. H. H. Oldright, returned in the latter part of January, from a trip to the West Indies.

The marriage of Miss Minnie Mersereau and Dr. Angus J. Murray took place at Fredericton Junction, on January 14th.

Dr. Seery, Fredericton, N. B., has been very ill for some time. His condition is still one of considerable anxiety.

Dr. Newbold Jones, a member of the Royal Victoria Hospital staff, was ill in the institution. He was suffering from typhoid fever.

Dr. Stephenson, of Iroquois, has resigned his position as surgeon to to the G. T. R., a position which he had held for about fifteen years.

Dr. J. D. Thorburn was over at St. Catharines recently for a couple of days' rest after an attack of grip. He has resumed his practice.

The many friends of Dr. Gilbert Gordon, of Toronto, who has been very ill with an attack of peritonitis, will wish him a speedy recovery.

Dr. Macdonald, of Qu'Appelle, who has just finished a course at Philadelphia, returned to the city from the south in the latter part of January.

Dr. McGibbon, a recent graduate of McGill Medical College, Montreal, who has been visiting in Toronto during the past month, left a short time ago for Edmonton.

Dr. A. A. Robertson, son of Dr. Robertson, of Lennoxville, has been appointed one of the clinical assistants in neurology on the staff of the Royal Victoria Hospital.

Dr. G. R. McDonagh, of Toronto, has been spending a vacation out of town. He went to New York for a short time and thence to Jamaica. He will return about 15th March.

Dr. J. C. Stinson, son of Mr. Cope Stinson of Brantford, has been elected a member of the San Francisco Board of Health. The postion is a most important one in that city.

Dr. and Mrs. Fraleigh of 596 College street left on the 4th of February for New York, where they took the steamship Kaiserin for a trip to the Mediterranean and the Orient.

Dr. W. W. Andrews, of Mount Allison University, Sackville, has invented a microscope for dissecting purposes. It is said to be a very practical apparatus for this delicate work.

Dr. O. Totten, of Forest, has been appointed by the Dominion Government, physcian to the Indians at Kettle Point and Stoney Point. He has also been appointed coroner for Lambton. In both positions he succeeds the late Dr. Scott.

Dr. J. D. Reid, M.P. for South Grenville, was confined to his home for a short time suffering from a nervous reaction, due to his awful experience at the Wanstead railway tragedy. It appears that for three hours the doctor, who was one of those who escaped, supported the head of a dying man, who was pinned under the car, without changing his position.

OBITUARY.

ARTHUR VALLEE, M.D.

Dr. A. Vallee, of Quebec, died on 23rd January. Dr. Vallee was one time medical superintendent of the Beauport Asylum. He was about 50 years of age. He was regarded as a high authority on insanity, and was one of Quebec's finest citizens.

E. J. HODGKINSON, M.D.

Dr. E. J. Hodgkinson died at 238 Farley Avenue, Toronto, 29th January, at the age of 78. Deceased had retired from practice for some years. He was formerly a well-known practitioner in the east end of the city, having his office on King Street near Sackville Street. He leaves a grown-up family.

ALEX. SCOTT, M.D.

Dr. Alex. Scott, one of the most prominent citizens of Forest, died suddenly in his office January 20th. He was 62 years of age, and had practiced in Forest for over thirty years. He took an active interest in educational matters. He leaves a widow and three grown-up sons.

GEORGE BATES MOTT, M.D.

Dr. George Bates Mott, at one time a leading physician of Petrolea, died at Wallaceburg, on Saturday Jan. 17th. For a number of years the doctor had been ailing, but not seriously enough to confine him to the house. Some few months ago he left for Wallaceburg, to live his remaining days with relatives there. His last illness only lasted one week, old age and cystitis being given as the cause of his death.

GEORGE D. FITZGERALD, M.D.

Dr. Gerald Delacey Fitzgerald, a popular young practitioner of Amherst, N. S., died very suddenly January 9th, of heart disease. He was 32 years of age and was born at Peterboro, Ont. He graduated from Queen's University in 1893.

W. S. McKAY, M.D.

Dr. W. S. McKay, physician in charge of the hospital at the Superior Lumber Co.'s camp, was found dead in bed at the camp on St. Ignace Island, on 7th January. The body was brought to Port Arthur and forwarded to Ingersoll, Ont., where his wife and brother live. Dr. McKay had been in this section a year, devoting his services to lumber camp hospitals.

W. H. D. YOUNG, M.D.

Dr. W. H. D. Young, who had been suffering from congestion of the brain, died at his residence, No 1135 Saguinet Street, on 6th February. He was fifty-three years of age, having been born June 14, 1849. He graduated at McGill University, and has for many years past been well known in Montreal. He leaves a widow and four children.

D. MUNROE, M.D.

Dr. D. Munroe, of Perth, died suddenly 8th February, at his home of heart failure. He was born in the Township of Lanark and was a son of the late Dr. D. Munroe. Deceased was 61 years of age, and leaves behind him a widow and two daughters.

GEORGE STEWART, M.D.

Dr. George Stewart, of Port Rowan died at his residence on Wolven Street, 28th January, from Paralysis. Three days before, he went on his daily round of visits to patients in the country and did not return until about nine o'clock at night. He was very cold when he reached home and went to bed almost immediately. Dr. Stewart was born in the township of Hamilton, in the county of Northumberland, about four miles from Cobourg, on the 21st of March, 1841, and was in his sixty-second year. He graduated in the year 1869, and went to a small village in Huron county to begin practice. After a year's trial in that place he came to Port Rowan, at the call of a number of the citizens who had advertised for a medical practitioner. Ever since he has remained here attending to the sick in the village and surrounding country He took a keen interest in educational affairs, and was for many years chairman of the Board of Education. He was reeve of the township of Walsingham before the division. In 1894 he was appointed Collector of Customs for Port Rowan, to succeed the late Col. Mabee, and he has held the office ever since. He also took a keen interest in military affairs and was surgeon of the 39th Regiment for a number of years. He married Miss Ida Stearns who, with four children, survives him.

HENRY W. DAY, M.D.

Dr. Henry Wright Day, Registrar of the County of Hastings died at an early hour on Sunday morning, Jan. 11th, at his home in Belleville. Although Dr. Day has been failing in health for some months the fatal illness did not develop until Friday the 9th.

Deceased was born in the township of Kingston, on the 6th of September, 1831, being a son of the late Mr. Calvin Day. His ancestors

were United Empire Loyalists, his great grandfather, Mr. Barnabas Day, having once lived on the present site of New York City. Near the close of the American Revolution the family came to Canada and settled near Kingston. Deceased received his medical education at Queen's University, where he graduated in 1859, and shortly after removed to the town of Trenton where he practiced until appointed Registrar of the County in 1868. He was in 1869 elected a member of the Council of Physicians and Surgeons of Ontario for the Quinte and Cataraqui District, and was at the same time elected President of the Council of the College of Physicians and Surgeons of Ontario. The Doctor was at one time a surgeon of a battalion of militia, and in 1866, during the Fenian Raid, organized a battalion and was made Captain of a Company. He kept up his relations with the militia until 1872, when he retired. Dr. Day took considerable interest in municipal and educational matters, and for 15 years was a member of the School Board of Trenton. In 1881, when Trenton was incorporated as a town, he was elected its first mayor and held that position for two years. He was President of the Provincial Board of Directors of the Central Ontario Railway. He was married on Dec. 31st, 1857, to Miss Annie Purdy, of Ernesttown, who survives him. The Doctor was a man full of public spirit and enterprise ; was a skilful, successful and popular practitioner, and in the social circle had many well-wishers.

SURGEON LT.-COL. MACLEAN, M.D.

By the death on 16th February, of Surgeon Lieut.-Col. Caird Ryerson Maclean, Meaford lost one of its most esteemed citizens. About a year ago Dr. Maclean was stricken with apoplexy, but recovered. A few months ago a second attack occurred and paralysis set in, which continued until his death. Dr. Maclean was in his 66th year at the time of his death. He graduated at Queen's University about 1860, and on the outbreak of the American civil war he joined the union army as surgeon. When the war was over he settled in Meaford, where he practiced medicine and surgery until his final illness. In 1879 he visited the old country, and while there he obtained the degree of M.R.C.S. He was mayor of Meaford in 1878. Since the organization of the 31st Battalion up to last year, when his health compelled him to resign, he was its surgeon, and was the principal medical officer of Niagara Camp, District No. 2. He leaves a widow, two daughters and a son—Mrs. H. M. Northey of Mysore, India, Miss Maude Maclean, Meaford, and Dr. J. Douglass Maclean, Sault Ste. Marie, Ont.

BOOK REVIEWS.

THE JOURNAL OF TUBERCULOSIS.

THIS Journal is so well known to the medical profession as to require no words of introduction. It is now issued in a much improved form. We congratulate the Editors, Drs. Ruck, and the publisher, A. H. McQuilkin, on the success of the Journal. It is published monthly in Ashville, N. C., $3.00 a year.

WORK ON THE DUCTLESS GLANDS.

DR. C. E. DEM. SAJOUS has well under way a two volume work on the above very important subject. The first volume shall appear shortly, the F. A. Davis Company of Philadelphia are the publishers The profession will no doubt welcome this work, as it deals with a section of medicine and surgery that has been heretofore much neglected.

INTERNATIONAL TEXT-BOOK OF SURGERY.

SECOND EDITION, THOROUGHLY REVISED AND ENLARGED.

In two volumes. By American and British Authors. Edited by J. Collins Warren, M.D LL.D., F.R.C.S. (Hon.) Professor of Surgery, Harvard Medical School, and A. Pearce Gould, M.S., F.R.C.S., of London, England. Second Edition, Thoroughly Revised and Enlarged. Vol. I. General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations and 9 full-paged colored lithographic plates. Vol. II. Special or Regional Surgery. Royal octavo of 1122 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net. Toronto: J. A. Carveth & Co.

IN planing this work the editors and co-workers have kept constantly in mind the needs of both student and practitioner. The result is a masterly exposition of the art and science of surgery, untrammeled by antiquated traditions. In its realization they have given to medical literature an invaluable text-book, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and such a detailed account of treatment as to form a reliable guide to modern practice. In this new edition the entire book has been carefully revised, and special effort has been made to bring the work down to the present day. The chapters on Military and Naval Surgery have been very scrupulously revised and extensively re-written in the light of the knowledge gained during the recent wars. The articles on the effect upon the human body of the various kinds of bullets, and the results of

surgery in the field are based on the latest reports of the surgeons in the field.

The chapter on diseases of the Lymphatic System has been completely re-written and brought up-to-date; and of special interest is the chapter on the Spleen.

The already numerous and beautiful illustrations have been greatly increased, constituting a valuable feature, especially so the seventeen colored lithographic plates. The work is excellent; we know of none to surpass it. It is clear, and concise, and up-to-date.

It is quite impossible to review so excellent and complete a work as "The International Text-Book of Surgery." The subjects covered are so numerous, and their treatment so thorough that it is only possible to speak in general terms of these two volumes. No one requiring a work on surgery will ever regret purchasing a Warren and Gould.

APPLIED SURGICAL ANATOMY.

Regionally presented for the use of students and practitioners of medicine. By George Woolsey, M. B., M. D., Professor of Anatomy and Clinical Surgery in the Cornell University Medical College, Surgeon to Bellevue Hospital, Associate Surgeon to the Presbyterian Hospital, Fellow of the American Surgical Association and of the New York Academy of Medicine. With 125 Illustrations, mostly colored. Including 59 full page plates. Cloth, $5.00 net; leather, $6.00 net. Lea Brothers & Co., New York and Philadelphia, 1902.

ALL sorts of books have been written on anatomy, regional anatomy, medical anatomy, surgical anatomy, topical anatomy, etc. One is naturally tempted to ask why another work on anatomy? The author answers by intimating that he has attempted to gather the best from a vast aggregation of matter on the subject, so as to make up a book of moderate size, on the regional and topographical plan. To meet these ideas the work is at times as much like an anatomical surgery as a surgical anatomy.

First of all, let us say a word or two on the illustrations. The censure is far too often true of works on anatomy that the illustrations are of very little value, and add but little to the usefulness of these works. In the case of the volume before us, whether original, or selected, the illustrations *illustrate*. The coloring and the method of lettering are very helpful to a rapid understanding of the structures portrayed.

In the text, there is a happy combination of the general descriptive, and regional methods. Throughout the work three main features are constantly kept to the front.

1. The defects, or abnormalities, that arise from errors, or defects in developments; 2. the diseases and injuries of the different regions and

parts, and the structures involved ; and 3. the best method of operating or treating these conditions, so as to injure these structures to the least extent, or preserve them to the greatest extent. Most will admit these are sound views of the relationship of anatomy to surgery.

A feature of the work of more than usual importance, is the terseness of the descriptions. Prolixity is the evil of too many works on anatomy. But of far more importance than terseness is clearness and accuracy. When these three features are combined, as in this work, the ideal reference volume is attained.

A very complete index of 20 pp, increases the useful of the volume, and renders the task of looking up any subject an easy and rapid affair.

The work is got up in the very best style of the well known publishers. In the matter of price, size, and merit, it is just the sort of book that the busy practitioner requires and will constantly consult.

SURGICAL ANATOMY, A TREATISE ON HUMAN ANATOMY IN ITS APPLICATION TO THE PRACTICE OF MEDICINE AND SURGERY.

By John B. Deaver, M. D., Surgeon-in-Chief to the German Hospital, Philadelphia. In these volumes, illustrated by about 400 plates nearly all drawn for this work from original dissections. Volume 1.—Upper Extremity ; Back of Neck ; Shoulder ; Trunk ; Cranium ; Scalp ; Face. Philadelphia : P. Blakiston's Son & Co., 1012 Walnut Street. Toronto : Messrs. Chandler & Massey. Price in cloth, $7 ; leather, $8.

If Vesalius, Morgagni, Malpighi, and many others of the old time anatomists were to visit us again, and examine Dr. Deaver's work on Surgical Anatomy, we can imagine that their surprise would be great indeed. Such elaboration of the subject, enormous amount of detail, and artistic finish of the plates, were unknown to them. They would hardly recognize their own favorite subject of study.

Volume 1 contains 632 pages and 151 full page plates. The text is a veritable storehouse of information on anatomy, topographical, descriptive, medical, surgical and regional. The application of anatomical knowledge to the elucidation of medical and surgical problems is an important part of every practitioner's daily work. In such application, the work of Dr. Deaver is of unquestionable value. We have examined this volume with much care, and are bound to state that the descriptions of regions, organs and structures have afforded the utmost satisfaction throughout. It is no easy task to understand the descriptions that are given in some text books of complicated regions. They require almost as much study to understand the text as the subject. Not so here. Dr. Deaver has the very necessary

essential of being able to state clearly, and yet briefly, what he means to convey to the reader. For this, two things are requisite: a thorough knowledge of the subject, and the ability to express that knowledge in lucid language. Dr. Deaver possesses both.

The illustrations are very handsome. They are faithful representations of the original dissections. The various structures are brought out in beautiful relief by exquisitely delicate shading and lining. The plates are full page, which permits of the details being brought out with great clearness. In this volume erudite scholarship and the highest ideals of the limner meet on the common ground of anatomy for the purpose of elucidating its many intricacies and rendering its endless bearings upon the healing art useful and interesting alike to the physician and the surgeon.

THE ANATOMY OF THE HUMAN PERITONEUM AND ABDOMINAL CAVITY CONSIDERED FROM THE STANDPOINT OF DEVELOPMENT AND COMPARATIVE ANATOMY.

By George S. Huntington, M. A., M. D., Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York City. Illustrated with 300 full-page plates containing 582 figures. Many in colors. Lea Brothers & Co., Philadelphia and New York, 1903. Price, half morocco, $10.00.

THE work before us is a maguum opus. It is an edition de luxe of superb character. The pages are 8 x 12 inches. There are 300 pages of text and 300 pages of plates. The make-up of the book is truly handsome, being printed in large clear type, on superfine paper, and bound in marbled cover and half morocco. The publishers merit their full share of praise for the form in which they have got up this large volume. It is, in the language of Keats, "A thing of beauty.

It is not an easy task to review such a work, unless the reviewer contents himself with a few words of general praise and drops the book at that. But this work deserves more attention than this. It will be well therefor to speak first of the illustrations. For the most part the illustrations are reproductions from photographs of actual preparations. By this means there is an accuracy of proportion and relationship that it is almost impossible to obtain by hand drawings. These photographs have been reproduced with great fidelity, especially in the matter of perspective, a thing so often absent in plates. When you examine these plates, you examine the actual dissections. The anatomists and the surgeons know how valuable this feature of such a work is to them. It is very disappointing to examine an anatom-

ical plate that is devoid of perspective, or a correct perspective. It should also be remarked regarding the illustrations that they are almost all original. Preparations have been photographed for this work, in order that the author could secure the sort of illustrations required to make clear the anatomy of these parts and to fit in with textual descriptions. This is making a book, so that the illustrations and text are really complemental to each other. To write the texts and then cull from various books, illustrations to embody in the text is a poor plan. Make accurate dissections first and obtain true pictures of these. With that as a foundation there is some hope of a useful descriptive text.

Turning to the text we notice that the descriptions of the various structures and organs are brief, clear and accurate. Much attention is paid to their developmental and comparative aspects. In anatomy this is as it ought to be. In the study of the peritoneum and abdominal viscera it is a hopeless task to take them as they appear without knowing something as to how they came to be so arranged and related to each other. The study of their development, with the aid of comparative anatomy, clears this up. There are abundant references throughout the text to the corresponding figures. The value of the book as a work of reference is greatly enhanced by a very complete index.

To those engaged in teaching anatomy, or in the practice of abdominal surgery, this work should prove of the greatest possible value.

DISEASES OF THE BRONCHI AND PLEURA; PNEUMONIA.

Diseases of the Bronchi. By Dr. F. A. Hoffman, of Leipsic. Diseases of the Pleura. By Dr. O. Rosenbach, of Berlin. Pneumonia. By Dr. F. Aufrecht, of Magdeburg. Edited, with additions, by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. Handsome octavo volume of 1030 pages, illustrated, including 7 full-page colored lithographic plates. Philadelphia and London: W. B. Saunders & Co.; 1902: J. A. Carveth & Co., Toronto. Cloth, $5.00 net; Half Morocco, $6.00 net

This, the fourth volume issued of Saunders' American Edition of Nothnagel's Practice, fulfils all expectations. The eminent authors of the valuable monographs which comprise the volume had, by their breadth of learning, their exhaustive research, and extensive practical experience, made their essays almost complete as originally written. Nevertheless, the author in the light of recent research, has made numerous valuable additions, so that the American edition represents the present state of our knowledge on the subjects under discussion. Among other things, these additions include new matter on the anatomy and physiology of the bronchi; on foreign bodies in the tubes; on the patho-

logy, bacteriology, and treatment of bronchitis, and the recent researches on bronchiectasis and on eosinophilia in asthma.

Much new matter has been incorporated into the section on pneumonia, including the recent work of Hutchinson and others on the blood and urine in that disease. In the Pleurisy section will be found an account of the latest bacteriologic studies, and references to the work of Morse on the leucocytes in pleurisy, to that of Williams and others on X-ray diagnosis, and to the Litten phenomenon. The work in every particular is thoroughly up-to-date, and no criticism is possible but praise.

THE ACCESSORY SINUSES OF THE NOSE, THEIR SURGICAL ANATOMY AND THE DIAGNOSIS AND TREATMENT OF THEIR INFLAMATORY AFFECTIONS.

By A. Logan Turner, M. D., (Edin.) F. R. C. S., (E. D.) Surgeon for Diseases of the Ear and Throat, Deaconers Hospital, Edinburg, with forty plates and eighty-one figures. William Green & Sons, Edinburg, publishers.

In 1898 Mr. Logan Turner delivered a lecture before the Fellows of the Royal College of Surgeons of Edinburg, entitled "The illumination of the air sinuses of the skull with some observations upon the surgical anatomy of the frontal sinuses." The following year Mr. Turner was awarded the surgical prize for his essay upon "the racial characteristics of the frontal sinuses based upon an examination of 578 skulls." The subject matter contained in these lectures together with additional observations on those other accessory sinuses of the nose with the recognition and treatment of their various diseases forms the basis of the present volume. Few men indeed are so situated that they have at their command such a wealth of pathological material or such a variety of crania of different races from which to draw their observations.

The first chapter introduces the reader to a splendid description of the anatomy of the outer nasal wall and the maxillary antrum. The description of the *ostium maxillare* is very clear. The author has found an *ostium maxillare accessorium* four times in nine dissections indicating a larger percentage than found by Giraldes and Zukerkandl who gave 10 per cent. as the proportion. The variations in size and position of the septun of the frontal sinuses are very clearly elucidated and specimens are pictured showing how one may open the *left* sinuses alone while operating for *right* sided disease.

The author leans to the opinion that the accessory nasal sinuses serve as subsidiary resonators of the voice and thinks it extremely important that they take any part in the warming or moistening of the air

in connection with nasal respiration from the anatomical museum of the University of Edinburg. Turner examined a larger series of skulls of various nationalities—Europeans, Tasmanians, Maoris (New Zealand), Africans, Esquimaux, Asiatics and American Indians. These were measured while transilluminated in a dark room and represent an immense amount of labor. This excellent work is the first so far undertaken. The author finds transillumination of maxillary and frontal sinuses of very great value, not only in estimating the probable condition within but also in forming a fairly accurate opinion as to the progress of the case. He does not, however, consider it as being of unvariable positive value. In connection with the frontal sinuses the author says: "When there is absence of illumination we must always feel some doubt as to whether it is due to the absence of the sinuses, to a thick walled sinuses, or to a diseased condition of the cavity."

Plate xxii, from a dissection of Prof. Symington, showing the anterior and posterior ethmoidal cells and their communications with the nose, is one of the finest we have ever seen. Arrows showing the course pus makes to reach the infundibulum from the anterior ethmoidal cells add greatly to the understanding of the drainage of this region. The relation of the anterior ethmoidal, frontal, and maxillary sinuses to the orbit is beautifully pictured in plate xxiii, from another specimen of Prof. Symington. The author considers very minutely the difficulties that may be encountered in entering the front nasal duct with a probe and clearly shows how these may in many cases be overcome.

The book concludes with two chapters devoted to the diagnosis and treatment of accessory sinus disease. The author writes on these topics in an excellently clear and forcible manner. The illustrations of this classical work are superb and from an artistic standpoint are not excelled by any work we have seen. In fact few publishers could turn out such a volume.

A COMPEND OF HUMAN PHYSIOLOGY.

Especially adapted for the use of Medical Students, by Albert P. Brubaker, A.M., M.D., adjunct Professor of Physiology and Hygiene, in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Anatomy and Physiology in the Drexel Institute of Art, Science, and Industry; Fellow of the College of Physicians of Philadelphia. Eleventh Edition, Revised and Enlarged, with Illustrations and a table of Physiologic Constants. Philadelphia: P. Blackston's Sons & Co., 1902. Price, 80c. net.

THIS is one of the Blakiston's well known quiz-compend series. The title might lead one, not familiar with the book, to expect that it consisted in questions and answers. This is not the case. It is a very

neat and scholarly, but small work on physiology ; and reads along in a continuous, and systematic manner. The book contains nearly 300 pages; and, in these, the subject of human physiology is very clearly stated. We have taken particular pains to examine the book, and can state that it is both accurate and up to date. Notwithstanding that the book is a small one, everything that is essential is given. What is absent is the irrelevant padding that goes to make books large, though not useful. The author knows what he wishes to say ; and has the happy faculty of saying it in a condensed, yet clear, manner. Those who wish to make themselves familiar with present day views on human physiology cannot do better than get Dr. Brubaker's Compend.

DISEASES OF THE RECTUM AND ANUS DESIGNED FOR STUDENTS AND PRACTITIONERS OF MEDICINE.

By Samuel Goodwin Gant, M.D., LL.D., Professor of Rectal and Anal Surgery at the New York Post-Graduate Medical School and Hospital ; formerly Professor of Gastro-Intestinal Surgery at the University and Women's Medical College, Kansas City, Mo. ; attending Surgeon for Rectal and Anal Diseases to the New York Post-Graduate Hospital, St. Marks Hospital, &c., &c., &c. Second Edition, Re-written and Enlarged, with thirty-seven full page plates, twenty of which are in colors, and two hundred and twelve smaller engravings and half-tones. Philadelphia : F. A. Davis Company, publishers, 1902. Price : Cloth $5.00 net ; Sheep or half Russia, $6.00 net.

To form any idea of the study the author has given to diseases of the rectum, it is only necessary to compare the present volume with the first edition. If such be done, it will at once appear how thoroughly the author has kept his work up to date.

The use of illustrations is playing an increasing part in medical and surgical books. In the present work, they are very conspicuous, both by their numbers and excellence.

The work covers the subject of diseases of the rectum very fully. There is a good account of the anatomy and physiology of the rectum, and the other parts in immediate relationship with it. Congenital malformations, constipation, faecal impaction, chronic diarrhoea, coccygeal conditions, venereal diseases of the anus and rectum, pruritus ani, proctitis, periproctitis, fistulae, faecal incontinence, fisures, non-malignant ulceration and stricture, prolapse, haemorrhoids, haemorrhages, non-malignant tumors, malignant tumors, colostomy, closure of artificial anus and faecal fistula, neuralgia, enteroliths, foreign bodies, wounds and injuries, railroading as an etiologic factor, are all fully discussed.

It would be quite impossible to attempt a full analysis of this octavo volume of 700 pages. It is so complete and trustworthy in its

account of the many diseases of the rectum and their treatment that there is little, or no room for criticism. It is, indeed, a genuine pleasure to read the work. The paper, press work, and binding are as ideal as the book making art could furnish. In form and matter, the work can be most cordially recommended. It is preëminently what the general practitioner requires

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BOOK ON THE PHYSICIAN HIMSELF AND THINGS THAT CONCERN HIS REPUTATION AND SUCCESS.

By D. W. Cathell, M.D. The Twentieth Century Edition, being the Eleventh Edition Revised and Enlarged by the author and his son, W. T. Cathell, A.M., M.D. Pages 411, Royal Octave, Extra cloth, $2.50 net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street.

THE authors state that there are two sides to the practice of medicine, a greater, or scientific; and alesser, or personal. It is the latter, or the physician himself that the book devoted. It is truly a book of books. The authors have read much and observed more. The advice on all sorts of things concerning the daily life and conduct of the physician is of the soundest possible character. This addition is a particularly attractive one. We can hardly understand why a physician does not possess himself of this book. We certainly know he ought to have it.

TEXT BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY.

By John J. Reese, M. D., Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania; Late President of the Medical Jurisprudence Society of Philadelphia. Sixth Edition revised by Henry Leffmann, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania; Pathological Chemist to the Jefferson Medical College; Vice-President British Society of Public Analysts. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. Toronto: Chandler & Massey, 1902. Price $3.00.

THE text book of Dr. Reese on Medical Jurisprudence is familiar to many members of the medical profession. It is an old and trusted guide to all that is essential in this branch of medical study. Dr. Leffmann has edited the present edition, and it may be safely assumed that the book would not suffer by being passed under his revision. The usual subjects of a medico-legal character, and toxicology, are handled in a thoroughly satisfactory manner. The book is got up in a good style, and consists of 660 pages. We can recommend this work, as one of the very best in the English language on the subject of Medical Jurisprudence and Toxicology.

THE MEDICAL EPITOME SERIES. GENITO-URINARY AND VENEREAL DISEASES, A MANUAL FOR STUDENTS AND PRACTITIONERS.

By Louis E. Schmidt, M. Sc., M. D., Associate Professor of Genito-Urinary Diseases, Chicago Policlinic ; Attending Genito-Urinary Surgeon and Dermatologist, Alexian Brothers' Hospital, Chicago. Series Edited V. C. Pedersen, A.M., M. D., Illustrated with twenty-one engravings. Lea Brothers & Co., New York and Philadelphia. Price $1.00.

It was the famous Dr. Samuel Johnson who said that "after all the best books are those small ones we can pick up in your hand, and read by the fireside." A small book may be a good one, whereas a large one may be of no value. The power to condense well is a rarer gift than to write diffusely. The present volume has several features to commend it. In the first place it is a good example of the pocket size book, next it is got up well as to paper, binding, printing, and illustrations, and lastly it is a model as to its subject matter. The book contains many excellent formulæ. At the end of the various chapters there are a number of questions to test the reader's memory on its contents. The book is not discursive and argumentative, it is didactic and dogmatic. All that is of importance is given in a terse, clean cut manner. This Series, when completed will be a most interesting set of books.

MISCELLANEOUS.

COUGHS AND THEIR TREATMENT.

By Drs. Alex. De Soto and C. W. Crimpton, of Wayside Mission Hospital, Seattle, Wash.

An intractable cough ! What condition so persistently tries the patience of every physician ? Careful examination has been made, the diet regulated, and one of the innumerable prescriptions for that ailment selected, but still the cough continues.

Then more investigation, and more careful prescribing; but still after weeks that familiar cough re-echoes through your waiting room, and you wish Mrs. Smith would change her Doctor. No such good fortune attends you, and that cough haunts you as dismal thoughts of phthisis do your patient, until you are almost determined to advise a change of climate.

It is not the object of this paper to go into details regarding the only too well known disadvantages of most of our familiar cough mixtures. Down to that household standby, " Cod liver oil in every form," they have proven in the vast majority of instances,—discouraging failures.

The above mentioned remedy, which the patient considers proof-positive of the Doctor's having made a diagnosis of consumption, may invariably be depended upon to disarrange the digestion at least.

Cod liver oil, once begun, must frequently be continued througout the entire winter season. Nor can it be shown that the ingestion of fats and oils into the, system, to become oxydized when coming in contact with the oxygen in the lungs, ever does more than raise the local temperature, by combustion. Although this may prevent cold in comparatively healthy lung tissue, its therapeutic (?) effect on the inflamed pulmonary structure may be described as postively harmful.

Cough is a symptom—varying in intensity and character according to its cause. Nor is that cause always situated within the respiratory organs thereselves. Cough is essentially a reflex act depending upon an irritation of the respiratory center. These sources of irritation may be subdivided as follows:—

Dropping of mucous from the posterior nares in chronic catarrh. polypi, enlarged uvula or tonsils, defective closure of the glotis, irritations within the larynx from whatsoever cause, malignant or otherwise. Bronchitis—pneumonia and pleurisy. Gastric when due to derangements of the stomach. Cardiac disease, irritations of auditory canal and organic diseases within the abdominal cavity.

From the foregoing causes, it may be readily estimated that to arrive at the exact nature of any given case may not always be an easy matter. Nevertheless, we must relieve the patient, without risk of disturbing either digestive or circulatory systems. Any remedy which will attain this object in a goodly number of cases is indeed a Godsend to patient and physician, and in every sense an ideal remedy. Not until our attention was called to Glyco-Heroin (Smith) did we become acquainted with a remedy which we have used with a most unvarying success in coughs of every description, and in patients of all ages and conditions, without the slightest unfavorable effect. The points which recommended Glyco-Heroin (Smith) are :—

1st. Palatability. 2nd. Economy, (3 to 4 oz. being ample for a cure of the average case). 3rd. Its immediate action, soothing the most trying cases. 4th. Its absolute freedom from unpleasant or unfavorable effects. 5th. It is not only a palliative but a curative agent. 6th. The Hyoscyamus it contains reaches those trying cases of dry cough due to other causes than simple catarrhal irritation of the respiratory tract.

We are convinced that Glyco-Heroin (Smith) has no competitors in results, its actions being almost specific. It will give satisfaction in every case where results may be reasonably expected, and in many cases its beneficial effects go beyond the most sanguine expectations.

The character of the cases coming to the Wayside Mission Hospital for treatment may be imagined when it is remembered that it is essentially a charity institution; that the vast majority of patients come to us after having tried everything else. These are worthy prospectors and miners, broken in health and pocket by exposure and misfortune.

As proof of the above we submit the following cases:

(1) Dr. McK. Laborer, 22 years. Had typhoid fever convalescence much impeded by severe coughing spells, frothy white expectoration, irritable stomach. This condition defies all treatment. There was marked dullness at apeces of both lungs to the third intercostal spaces. Morning temperature normal, respiration, 28; pulse, 104: Evening temperature 101, respiration, 36; pulse, 120: This condition has persisted for nine days, with progressive loss of strength. December 16th. Glyco-Heroin (Smith). Teaspoonful every 2 hours. A.M. temperature normal, pulse, 104; respiration, 28: P.M. temperature 101, pulse, 120; respiration, 36: December 17th. Slight relief to cough, had some sleep. P.M. temperature 100, pulse, 96; respiration, 24: December 18th. Relief marked. P.M. temperature normal, pulse, 80; respiration, 20: December 19th. Expectoration free, appetite and spirits better, rapid improvement. December 20th. Improvement continued, sat up about 2 hours. January 8th. Dullness and cough gone, spirits and appetite good, gaining flesh rapidly. January 11th. Discharge cured.

(2). Wm. M. Cook, 52 years. Has had severe cough for last three months, due to cold caught in a typhoon on the China Sea after three days' exposure to cold and wet. Has hardly any sleep, incessant dry night cough. Glyco-Heroin (Smith) teaspoonful every 2 hours. February 21st. Immediate relief has had quite a little sleep. February 22nd. Improvement continued. February 24th. Slept all night. February 26th. Has not coughed in 48 hours. February 28th. No return of cough and discharged cured. Is now in charge of the culinary department of Hospital.

(3) D. A. Coolie. laborer, 48 years. Marked dullness at base of left lung, severe pain and dyspnoea. Temperature 102, pulse, 104; respiration, 40. There was daily chilliness at 11 a.m., followed by temperature of 103 2/5 to 104. Expectoration muco purulent. Emaciated, irritable, and appetite completely lost. January 26th. Glyco-Heroin (Smith) teaspoonful every 2 hours. January 27th. Some relief to cough, other conditions same. January 28th. Free expectoration, all conditions still unchanged. January 29th. No morning rise of temperature, p.m. temperature 102, pulse, 96; respiration, 32. January 30th. Seems somewhat better; had a profuse night sweat. January 31st. Temperature

101, pulse, 88; respiration, 24. Took considerable nourishment. February 1st. Temperature normal, pulse, 88; respiration, 24. Less dullness, no expectoration, cough disappearing. Spirits vastly improved. Said it was his third attack, and that in each former instance he was in bed 11 and 8 weeks, respectively. Continued to improve, and was discharged February 26th well.

(4). J. J. Laborer, 19. Pneumonia 3rd day, dullness of entire right lung. Temp. 103 2-5; pulse 120; resp. 60. Expectoration *pruin juice* very restless and thirsty. Slight delirium. Glyco-Heroin (Smith) teaspoonful every 2 hours.

18th temp. 102; pulse 102; resp. 48. Much easier. 19th temp. 100; pulse 84; resp. 36. 20th temp. nor.; pulse 80; resp. 24. Expectoration has changed, and is feeling much better. Absolutely refused to believe that he had pneumonia. Discharged cured.

(5). S. J. a diver, 34 years. Had just been discharged from another hospital where he had been treated for four months for typhoid-pneumonia. Had considerable dyspnoea; cough dry, spasmodic, at times slightly frothy expectoration. Temp. normal; pulse 100; resp. 28. Right plural cavity filled to the forth intercostal space with pleuritic fluid which could be heard to splash on slight agitation of the chest. Appetite poor, and is much dispirited. At five sittings three and three fourths galions of fluid were withdrawn by aspiration.

Nov. 6th Glyco-Heroin (Smith) teaspoonful every 3 hours, has much relieved the spasmodic cough; conditions in general seem to be improving. Nov. 11th. Cough has almost disappeared. Continued in this condition to Jan. 4th when two and one-half quarts of fluid were withdrawn. Feb. 3rd. Complained of pain under scapula and was given a dry hot air treatment followed by violent cough, fever 104-1-5; pulse 124; resp. 28; Glyco-Heroin (Smith) every 2 hours. Feb. 4th. Had a hemorrhage and slightly delirious; the general condition unchanged. Feb. 5th. Cough almost gone; temp. 101 2-5; pulse 82; resp; 21. Is eating some, and feels much better.

Glyco-Heroin (Smith) has always relieved his cough promptly, and I believe he would be dead but or its soothing influence. While we do not look to the remedy as a cure for Hydrothorax, we appreciate the sedative effect, in which it is superior to *morphine* and harmless.

(6). Jan. 11th. W. McD. Age 18. Measles thoroughly developed Temp. 103 2-5 violent cough; yellow expectoration; cannot find rest because of the cough. Glyco-Heroin (Smith) teaspoonful every 2 hours. Jan. 12th. Cough is much better. Jan. 13th. Has not coughed all night. 18th. Discharged without return of cough. Entire quality of Glyco-Heroin used was 4 oz.

(7). L. G. Age 10 mos. Jan. 29th operated upon for rad cure of right inguinal hernia ; on Feb. 6th although doing well in every way he was seized with violent paroxysms of coughing (probably due to dentition). The stitches threatened to tear out and the operation prove a failure. Glyco-Heroin (Smith) *XV Guttae* every 4 hours completely controlled the cough in five doses and so saved the case. There were no visible unpleasant effects of any kind whatsoever from the medicine.

(8). J. H. Age 22, in hospital one year for tubercular disease in the lumber region, Jan. 15th was operated on and much diseased tissue removed. He developed violent cough Jan. 6th which caused him great pain and bleeding in the wound. Glyco-Heroin was given, two teaspoons every three hours, with splendid effect. Five doses remove the cough entirely.

(9). Mrs. T. Depot Matron ; had a cough that had defied the treatment of several physicians. It was a dry hacking cough, and had had no sleep in five nights. Completely cured by four oz. of Glyco-Heroin (Smith).

(10). Mrs. M. had been to several physicians ; her case had been diagnosed as phthisis ; she was talking one half bottle Emulsion of Cod Liver oil per day. She was also using morphine freely, 4 oz. of Glyco-H completely cured her, and she gained at the rate of one lb, per day.

(11). Miss E, seventeen, cough 4 months without relief, was immediately relieved by a few doses of Glyco-Heroin (Smith).

(12). Mrs. D. distressing cough and some dullness at base of right lung. Her cough conpletely cured by less than 1 oz. of Glyco-Heroin.

(13). McD. Aged 36. Policeman. Had been coughing 3 weeks and was getting worse. Four oz. of Glyco Heroin completely cured him.

(14). Mr. R. with all symptoms of pneumonia. Temp. 104 ; pulse 126 ; respiration 40. 4 oz. of Glyco-Heroin completely cured him.

"ARE YOU IN PAIN?"

YOU will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant. The ideal remedy must not only do its work, but it must also do it quickly. Touching this point is an article in the *Boston Medical and Surgical Reporter*, by Hugo Engel, A. M., M. D. The author says ; "Antikamnia has become a favorite with many members

of the profession. It is very reliable in all kinds of pain, and as quickly acting as a hypodermic injection of morphia. It is used only internally. To stoppain one five-grain tablet is administered at once; ten minutes later the same dose is repeated, and if necessary, a third dose given ten minutes after the second. In 92 per cent. of all cases it immediately stops the pain."

ACUTE DYSPEPTIC DIARRHŒA OF CHILDREN AND ITS TREATMENT.

M. A. AUERBACH, Ph.G., M.D., New York City Medical Inspector, Department of Health, writes thus:—This disease is chiefly due to errors in diet, which do not necessarily consist in the substitution of unnatural foods for the mother's milk. The mother's milk may be altered in quality by emotional causes, by improper food and improper hygiene. Or it may be caused by over-frequent nursing. More often however it is caused by the ingestion of unnatural foods. There are also pre-disposing influences which facilitate the action of the exciting causes. These are especially dentition and the extreme heat of summer. The prognosis of the aforesaid disease among the better classes is commonly favorable, but among the weak, puny and half starved children of our lower east side large numbers perish, especially during the summer months. The old time treatment in these cases was a primary purge, calcined magnesia, or castor oil. After the purge bismuth sub-nitrate or prepared chalk was given. Since the introduction of Glyco-Thymoline (Kress) the above mentioned methods have been cast aside. A very good effective prescription which has given me most splendid results in these kind of cases, in conjunction with a carefully restricted diet is

℞ Bismuth Sub-nitrate ℥i.
Tr. Opii Deoderatum m.x.
Glyco-Thymoline ℥ii.
M Aqua Rosarum ad q. s. ℥iv.
Sig. ℥i every three hrs.
(For a child one year of age.)

THE THERAPUETIC VALUE OF PEPTO-MANGAN (GUDE).

DR. J. W. FRIESER, Vienna, Austria, concludes his article on anæmia and chlorosis in the following language: It is my custom to direct that Pepto-Mangan be taken in these cases to the exclusion of other treat-

ment. and only in combination with appropriate dietetic measures, for periods of several weeks. and if necessary longer, three to four months. For adults I prescribe three tablespoonfuls to three to four desertspoonfuls daily, for children three teaspoonfuls daily, in water or some white wine. During the entire time of administration I prohibit the use of raw fruit, acid or highly-spiced dishes, and order a vigorous and regulated diet. In severe cases of anæmia and chlorosis I recommend rest in bed for some time, and if possible have the patient placed in a well-ventilated sitting-room; while in the lighter cases I order, besides the medicinal treatment, a frequent sojourn in the open air, and if possible a prolonged stay in the country in a carefully selected place, and short and non-fatiguing walks.

In some instances I have observed excellent results from a rest cure in conjunction with ferruginous medication, and appropriate hygienic and dietetic treatment.

IN MEDICINE, QUALITY COMES FIRST.

ALL the preparations of Wm. R. Warner & Co. are known for excellence of quality, accuracy, and uniformity of composition. The effervescent lithia water tablets furnished by this firm offer us a ready and effective method of introducing lithia into the system for the relief of the many disorders in which that remedy is of conspicuous service. The tablets are made in two strengths, one containing 3 and the other 5 grains.

FREE VOLUME.

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SAUNDERS' NEW YORK OFFICES.

MESSRS. W. B. SAUNDERS & Co., of Philadelphia, have opened a branch of their business in the Fuller Building, or the "Flatiron Building," on the triangle bounded by Broadway, Fifth Avenue, 22nd and 23rd Streets. From the offices on 17th floor can be obtained a panoramic view of New York. All physicians visiting New York are cordially invited to visit these offices, which are to be under the charge of Dr. Reed B. Granger.

J. H. RICHARDSON, M.D., M,R.C.S. ENG.

UZZIEL OGDEN, M.D

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THE CAUSATION AND PREVENTION OF PHTHISIS.*

By BYRON BRAMWELL, M. D., F. R. C. P., F. R. S. Edin.
Physician to the Royal Infirmary, Edinburgh.

THE prevention of phthisis is one of the most important questions of day; and is attracting much attention. The following facts are now fully recognized; that in its early stages phthisis is curable in a much larger proportion of cases than was at one time supposed, that it is a preventable disease, and that a determined effort should be made to deal with it both in the way of prevention and cure. The crusade against pithisis will do much to diminish the disease, and will be of incalculable benefit to the whole community.

The prevention of phthisis is a large and complicated problem. It should be clearly understood that any great measure of success will only be attained through very decided, and, what may to some seem, arbitrary measures. For anything like the complete prevention of phthisis the assistance of the Government will be required in co-operation with patients affected with the disease, medical men, nurses, with those in charge of cattle, dairies and milk, and with sanitary authorities. To carry out all the measures which are necessary for the prevention of phthisis, will involve a large expenditure of money; but the result will be worth the cost.

Preventive measures during the past 50 years have accomplished a great deal of good, though these measures have been far from perfect. The reduction of the mortality has been due to general sanitary improvement and not to special measures against tuberculosis. The death rate, from all forms of tuberculous diseases, in Britain, per million, is as follows: 1851 to 1860, 3,483; 1861 to 1870, 3,420; 1871 to 1880, 2,863; 1881 to 1885, 2,540; 1886 to 1890, 2,322; 1891 to 1895, 2,122. In England and Wales, at least 40,000 deaths are each year due to phthisis. Tuberculous diseases cause more deaths than all the other acute infectious diseases put together. Phthisis causes one-fourth of all the deaths between the ages of 15 and 50. The prevention of phthisis, to a great extent, means the prevention of all forms of tuberculous diseases, since the sputum of the phthisical patient is the main factor in the spread of

* A summary of five lectures in the *Lancet*.

the disease. If phthisical sputum could be completely destroyed and the spread of the disease by this means prevented, and if by proper precautions the spread of the disease from bovines to man could be prevented, it would be possible in time to almost completely eradicate tuberculosis. It will consequently be seen that the chief means for the prevention of tuberculosis are (1) the disinfection and destruction of the sputum, and (2) the thorough inspection of the meat and milk supplies. Secondary to these come the careful attention to the health, and to hygienic and sanitary conditions.

In order to carry out preventive measures in an intelligent manner, the following points must be borne in mind. All tuberculous affections are due to the introduction of the tubercle bacilli or their spores into the body. The bacilli are not generated *de novo*, but are always derived from a previous case. The bacilli may be found in the sputum, fæces, urine, or other discharges, and may be blown into the air in the act of coughing. The bacilli in the dust form may retain their vitality for some time. This varies but is held by different observers to run from months to years, under conditions favorable to the germs. Persons have contracted phthisis by living in houses previously occupied by consumptives. These houses may remain infective for a long time. It is generally believed that milk containing the bacilli is very dangerous to children. Many children die of tabes mesenterica, probably contracted in this way. The fact that during the past 50 years, the mortality due to tabes mesenterica has not diminished in the same proportion as that of other tuberculous affections is probably explained in this way.

The bacilli enter the body with the inspired air, with food or drink, or by means of inoculation.

From what has been said, it may be concluded that phthisis is an infectious and communicable disease, dangerous to the public health, and that all forms of tuberculosis are preventable. Whether or not a person who has been exposed to an infection will contract a contagious disease depends upon (1) the intensity of the poison, and (2) the resisting power or susceptibility of the individual.

The intensity of the poison depends upon the dose, the source of infection, the channel through which the poison is introduced into the system, and the virulence of the poison, for the virulence of germ poison varies from time to time.

The resisting power of the individual depends upon his constitutional peculiarities, since some persons are more susceptible to infection than others; his condition of health at the time of exposure; and the condition of the tissues with which the germs are first brought into contact.

If, therefore, the dose of the poison should be large, or if the poison should be of a virulent type, and if, also, the vitality of the system, or of the tissues with which the poison comes in contact, be lowered, the risk of infection is greatly increased. Phthisis, however, differs very materially from the other contagious and infectious diseases, in the fact that it is very slightly communicable. The risk which a perfectly healthy person, with good sanitary surroundings, runs of contracting phthisis is very small. A healthy wife does not often contract the disease by waiting upon her phthisical husband, and *vice versa*. But much depends upon the attendant's health, and the conditions under which attendance is rendered. It must be concluded that, though every case of phthisis is due to the introduction into the system of the tubercle bacillus or its spores, the disease is but slightly infectious in the case of perfectly healthy persons.

It would therefore appear that the susceptibility of the person exposed is the main factor in determining whether infection will take place or not. Tubercle bacilli must be very frequently introduced into the system without phthisis resulting. Doctors and nurses must often inhale the bacilli, and yet they do not often become infected. This opinion is based upon the experience of numerous observers; good health and good sanitary conditions render the risk of infection almost nil. Overcrowding and inherited and acquired weakness are the dangers that must be carefully guarded against. In other words, a suitable soil must be present to allow the bacilli, which have been inhaled, to take root and develop, or to be conveyed to the glandular structures in the neighborhood. It is probable that the tubercle bacilli which lodge on an abraded or unhealthy mucous surface, do not necessarily cause disease at this point, but that they may pass on to the lymphatic glands, or through the vessels and lymphatics, to distant parts of the body. It is in this way that cases of apparently primary tuberculosis of the bones, joints, or membranes of the brain can be explained. Whether the germs can penetrate through the healthy mucous membrane is not settled; but, if this does happen, it is probably rare. When the mucous surface is healthy, the seed falls upon barren soil, and does not take root. If the mere lodgment of the bacilli on the mucous surfaces were capable of causing tuberculosis, the disease would be much more frequent in the larynx and intestines than is the case, as these surfaces must often be the first resting places for the germs. If the pressure of the germs on the mucous membranes was sufficient to cause tuberculous infection, tuberculous ulceration of the larynx and intestines should occur in every case of pulmonary tuberculosis, since multitudes of bacilli must daily be brought

in contact with these mucous surfaces in almost every case of phthisis. It would seem therefore that in the great majority of cases something more is required than the presence of the bacilli to produce tuberculosis.

One of the most important factors in the formation of the so-called suitable soil is heredity Since the discovery of the bacillus, the tendency has been in many quarters to under-estimate or indeed to ignore the influence of heredity. This should not be the case. And while it must be borne in mind that one member of a family may contract the disease from another, as children from a parent, apart altogether from any hereditary influence, still there remains abundance of evidence for the belief that heredity plays an important part in the production of phthisis It must be admitted, however, that direct inheritance of tuberculosis is very rare. It is the tendency to phthisis which is inherited, not the disease.

The exact manner in which heredity acts has not been fully settled. Some think that the mucous membrane of those who inherit a tendency to the disease is so sensitive to the infection that the germs may, by mere implantation, take root and develop. This would hardly seem to be a full explanation, as the larynx and the intestines become affected in only a certain proportion of consumptives, though both the pre-disposition and the germs are there ; and many members of consumptive families escape, though no doubt often inhaling the germs. It is much more likely that in persons with a hereditary tendency to the disease, there is some peculiarity about the respiratory organs, as defect of chest capacity, which causes insufficient air change, and stagnation of air and secretions in the air cells and minute bronchi ; or a peculiar vulnerability in the lung tissue, by which catarrhal or unhealthy conditions of the bronchial mucous membrane are readily set up by cold, dust, irritating air, and such like, and that these catarrhal lesions form a suitable nidus for the bacilli to develop in. If this view is correct it is obviously of the utmost importance that the respiratory organs be maintained in a healthy condition. Persons with a consumptive family history should guard against colds, dust, bad air.

It would seem therefore that the three main factors for the production of the disease are :

1. The introduction into the system of the germs.

2. An unhealthy or injured condition of the mucous membrane of the respiratory tract.

3. Diminished vital resistance to the germ on the part of the tissues.

The prophlaxis of phthisis therefore consists in : Preventing the entry of the bacilli ; the maintenance of the respiratory organs in a healthy condition ; and the raising of the resisting power of the tissues,

so that they may be able to withstand the invasion of the germs, even after they have entered the body.

In the prevention of tuberculosis in all its forms, attention must be given to the precautions which the individual should take to protect himself, and the measures which municipal, sanitary and government authorities should enforce with the object of reducing these diseases to a minimum.

The individual should always endeavor to increase his vital resistance by maintaining his health in the best possible state of efficiency. He should avoid all conditions likely to produce, in the respiratory and gastro-intestinal tracts, alterations which would favor the absorption of the tubercle bacillus; and to remove these conditions if they exist. He should take every precaution to avoid the introduction into his system of infected air and milk. In the case of children, special attention should be given to the dietary and the condition of the digestive organs. Dirty feeding bottles, unsuitable diet, cold, and unsanitary surroundings should be avoided as tending to cause gastro-intestinal catarrh. If such should exist, it ought to be cured as speedily as possible. A catarrhal condition of the digestive canal is probably a potent factor in the production of tabes mesenterica, tubercular meningitis, and other tuberculous diseases. Care should be directed to the condition of the mouth and throat, as the bacilli may enter through an unhealthy condition of these. The organs of respiration should be developed by means of proper exercise. Those with a hereditary tendency should be well fed, clothed, and housed; and should live in a high, dry and pure atmosphere, they should take plenty of exercise, should be much in the sunlight, and sleep in a thoroughly ventilated bedroom. Certain occupations, such as those of the stone-mason and knife-grinder, should be avoided; and some other chosen which is outdoor and active in character. Chest gymnastics should be practised with the view of enlarging its capacity. Wholesome but nutritious foods should be used, with as much good milk and butter as can be digested.

Persons living in close contact with phthisical patients should take the utmost care to avoid taking into their system tuberculous matter, and to see that no dust is allowed to accumulate. Phthisical patients should not kiss healthy persons; and cups and towels should not be used in common. They should insist on all sputum and excreta being at once destroyed. There should be a maximum of air and sunlight in the room, so as to dilute the infection. Sputum should not be allowed to remain on the lips and beard, and all clothing soiled with sputum, etc., should be thoroughly disinfected. Unaffected persons should not, if possible,

sleep in the same rooms, and never in the same bed with phthisical. Overcrowding in houses, factories, schools, etc., must be avoided.

Public bodies have a duty to perform. They should inspect dwellings, factories, schools, streets, drains and such things, to see that no insanitary conditions are allowed to exist that could be got rid of. They should do what they can to instruct the public in the necessary rules of guidance regarding tuberculosis, as to the nature of the disease, the importance of good sanitary conditions, and the precautions the sick ought to observe. The public is now beginning to take real interest in all these questions, and much good is bound to come from it.

Since early diagnosis is of great importance, public bodies should make arrangements for the gratuitous examination of sputum and other discharges. Proper sanitorium and hospital accommodation ought to be provided for the treatment of the early cases, and for the isolation of the advanced cases. Many advanced cases with profuse expectoration or diarrhœa, are sources of danger to the community, as, owing to their weakness, they are often unable to attend to personal cleanliness, the destruction of sputum, etc. To sum up, patients should be instructed as to what to do in the way of disinfection, etc., necessary appliances should be provided free of charge to poor patients, all insanitary conditions should be removed, the rooms occupied by phthisical patients should be disinfected, and hospital accommodation should be provided for certain advanced, poor cases.

Although many distinguished medical authorities are opposed to the compulsory notification of phthisis, nevertheless, the advantages far outweigh the disadvantages. It must be understood that this statement is only made on the proviso that the object is to reduce all forms of tuberculous disease to the greatest extent possible by the means at our command. If the object is merely to deal with phthisis in a way which is easy and agreeable, compulsory notification is not necessary, nor advisable. But if the object is to reduce the prevalence of the disease to the greatest possible extent, compulsory notification is necessary.

Phthisis is the most prevalent and fatal disease to which the human race is liable. In England and Wales 40,000 die annually of this disease. Dr. A. Newsholme estimates that between the ages of 15 and 50, one-fourth of all the deaths is due to it; and Dr. H. Biggs thinks that one-half of the entire adult population, at sometime in life, acquire the disease. In most modern, civilized countries, phthisis causes more deaths than all the other infectious diseases lumped together. Further, a great majority of those who die of phthisis are adults, whereas many who die of other infectious diseases are children. Again phthisis only too often carries off the brightest and the best of the race. It must also be remem-

bered that if the prevalence of phthisis can be reduced, other forms of tuberculous disease will become less frequent also.

Against notification the argument has been advanced that it would divulge a medical secret and the public would protest. If the notification of phthisis would aid in stamping out the disease, this sentimental objection should be disregarded. Under a judicious system of notification, no undue publicity is given to the fact that any person is affected. Too much stress has been here laid upon heredity. The introduction of the tubercle bacilli or its spores are necessary to produce phthisis. The public has consented to the notification of other diseases and the idea of divulging a medical secret should not stand in the way.

Another argument which has been advanced is that phthisis differs in many ways from the acute infectious diseases. and that the notification of them is consequently unnecessary and undesirable.

The object of notification in phthisis is not to restrict the liberty of the patients, nor to isolate them, but to locate the cases, and so enable the authorities to take the necessary steps for preventing the spread of the disease. It is quite possible to arrange a system of compulsory notification that would be beneficial, that would be effective and work well in practice, and that would yield greater advantages than disadvantages.

To deal effectively with the disease, it would be necessary to have power to enforce preventive measures, and to remove to an hospital those phthisical patients who, in consequence of their inability or unwillingness to carry out the necessary preventive measures, are a source of danger to the community. These measures, if they could be carried out, would be of the greatest value in preventing the extension of the disease; they would entail a large expenditure, but the money would be well spent.

It has been argued by some that because the infection is in the sputum in most cases, there is no need for notification. The reverse is really the case. If cases of phthisis were reported, and proper means taken with these cases, it would be an easier task than in any other infectious disease to make preventive measures effective. So many of the poor who suffer most from phthisis will not carry out any preventive means, unless looked after by someone who has sufficient authority vested in him to enforce proper precautions.

Among the reforms that ought to be introduced to render compulsory notification of any value would be those of arranging for laboratories where the sputum could be tested; the correction of insanitary conditions, likely to cause phthisis; the diffusion of leaflets and suitable reading matter; the provision of proper spittoons for the poor, and necessary disinfectants; the regular inspection of the premises where consumptive patients are domiciled; the removal of poor cases to a

hospital, where proper isolation and preventive measures at home are impossible; and after the death or removal, of a consumptive patient, the disinfection of the house or room.

It has been said that the compulsory notification of phthisis would not work, that it could not be satisfactorily carried out in practice, that it would cause hardships to the patients—such as losing situations—that it would alienate the public sympathy from our efforts to control the disease. But whether these results would follow or not, altogether depends upon the nature of the regulations that would be adopted. The present Contagious Diseases' Act would not meet the requirements of the case. The restrictions that should be placed upon the consumptives are altogether different from those for the diseases generally known as infectious. That a system of notification is feasible is proved by the success that has attended the New York system of compulsory notification; it appears to be eminently well suited for the special peculiarities of phthisis.

In the case of phthisis, the interference of the sanitary authority would only be required when the medical attendant demanded the assistance of the Medical Health Officer, and this would rarely be demanded, except in the case of the poorer people living in the more crowded districts. Under the system suggested, every medical man in attendance on a case of phthisis would, for the time being, be in the service of the local sanitary authority. Through the medical attendant all needed regulations might be carried out, and proper instructions given for the protection of others. The notification of the case by the medical attendant shall be regarded as confidential. Experience shows that where it has been tried such a system of compulsory notification works well in practice.

It is admitted that we must chiefly look to the medical men in charge of the patients for the introduction of preventive measures. They would advise their patients and those with whom they live as to to the measures which ought to be taken with regard to the sputum, ventilation, cleanliness, and so on. A suitable system of compulsory notification would strengthen the hands of the medical profession in dealing with the disease.

As soon as a case came under the observation of a medical practitioner, he would notify it; each notification should be paid. In notifying the case, the medical attendant would state whether it was necessary for the local authorities to interfere or not. No case would be notified unless the diagnosis was confirmed by the microscope.

Those patients who will not carry out the proper precautions (with regard to the disinfection of sputum, etc.) must be regarded as a real source of danger to others. Power should be given to the Sanitary

Officer to commit such persons to a hospital, partly for isolation and treatment, but also with a view to education in the sanitary matters pertaining to their affliction. For this purpose a certain amount of hospital and sanitorium accommodation would have to be provided, if it is the intention to reduce the disease to the lowest attainable limits. Until the disease is brought somewhat under control, it would not be possible to find accommodation for all the needful cases. In the first instance, compulsory measures would have to be applied with great caution. It would be judicious, at first, to deal only with the worst cases. Unless the public is willing to face a considerable expenditure in money, and to agree to the necessary compulsory measures, it is useless and Utopian to talk of stamping out and completely eradicating phthisis.

It has been urged against compulsory notification that it would entail great hardships upon the consumptive, since it would entail loss of employment, etc. Such a result might follow if the public were allowed to believe "that phthisis is a dangerous infectious disease communicable from person to person." But this view is erroneous. The public should be taught that a healthy person living or working in close contact with a patient suffering from phthisis, runs little or no risk, provided that certain simple precautionary measures, such as the destruction or disinfection of the sputum, are carried out. If this were thoroughly understood by the public, there would be much less risk of loss of employment than is feared. Phthisis is only dangerous through the sputum; the sputum can be easily destroyed and disinfected; and if it is destroyed while still moist, there is practically no risk of infection. The consumptive in himself is almost harmless and only becomes harmful through bad habits. If it became the rule that a consumptive could only maintain his situation by the strictest observation of all the safeguards to others, a great step would have been taken onward. It must be remembered that the healthy have a right to be protected against infection. No employer should keep an employee who is a source of danger to his fellow-employees; nor should the authorities permit it, if they can prevent it. The healthy have a right to demand that the phthisical person should adopt the necessary precautions to prevent the spread of his disease. There is now a widespread and exaggerated fear of the disease. The notification of cases, the distribution of proper literature, and the adoption of preventive means would do much to correct the present view, and to enable the consumptive to obtain employment.

If the public once realised the enormous benefits to be gained by reducing consumption to its lowest attainable limits, compulsory notification and other measures necessary for dealing with the disease would be agreed to.

SOME RECENT STUDIES ON IMMUNITY.

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NO subject, in medicine, presents so many points of interest as the subject of immunity from infectious diseases; interest which arises, not only on account of its practical bearing in the prevention and cure of infectious disease; but also, because, bound up with it is the much broader question of the prevention and cure of all diseases which afflict the animal body. It is but another example of the unity of all biological processes that every new discovery in the field of the pathology of these diseases has a bearing, not only upon general pathology, but also on general physiology. And we see, for example, that when our knowledge became ripe for Ehrlich's side chain hypothesis for the explanation of immunity, this same hypothesis naturally included an explanation of the process of assimilation.

The subject of immunity is as old as medicine; the fact that recovery from an attack of a specific disease meant that that disease need not be feared again must have early impressed itself upon the common knowledge of the people, and we find that back in the dark ages of Chinese history, it lead to the introduction of inoculation for the prevention of small-pox. Although the fact of immunity was known for many centuries in the western world, its practical application did not appear until Lady Mary Wortley Montagu introduced inoculation for small-pox from the East. Undoubtedly, influenced by the results and failures of inoculation the immortal Jenner, building wiser than he knew, proposed the system of immunisation to the same disease by vaccination with results of untold value to the human race. Jenner was, undoubtedly, justified in his own mind by his observations upon the genetic relationship of cow-pox and small-pox, and he has been fully justified by the results that vaccination has attained in the past century, but it demonstrates his far-seeing mind, that it has remained for the investigations of the past few years to justify him upon experimental grounds.

With the discovery of bacteria as the cause of infectious diseases, the study of immunity began in earnest, and although we are yet far from understanding all the phenomena, still, in the past few years our knowledge has grown marvellously.

The early researches of Pasteur were directed largely to the practical application of immunizing processes, and we have as the important results of the labor of that eminent bacteriologist the immunization

against anthrax, which has been of such great economic importance to France, and the method of treatment of rabies which has been so wonderfully successful in combating that disease. But although these methods were of practical value, and have been not without interest in the elucidation of the general problems connected with the subject, yet it has been since Pasteur's time that the greatest strides have been made, and in this work not a small share has been taken by the Institute that bears his name and the workers who were trained there by him. A necessary element in the proper understanding of the subject of immunity was a proper conception of the ways in which bacteria act when introduced into the body, i.e., the methods of disease production by these minute parasites. Although for a short time it was supposed that in certain cases, at least, the mere mechanical presence of bacteria was an important factor in the production of disease, this was very soon abandoned, when the toxines or poisons elaborated by these organisms were discovered. It was then seen that disease was due to intoxication by the metabolic products of the parasite formed within and at the expense of the tissues of the host. The earliest attempts to isolate these poisons resulted in the discovery of a class of chemical compounds which have been called ptomaines, some of which proved to be intensely poisonous, but many of which were devoid of any toxic characters, or so slightly toxic as to render it doubtful whether they should be considered at all in explaining the phenomena of infectious disease. These poisons are fairly stable chemical compounds, and in the majority of cases their structural formula has been worked out and their chemical relationships clearly demonstrated. It now seems, however, that the means taken to isolate these substances were far too drastic to demonstrate the essential toxines of the microorganisms; in fact, it is more than probable that many of them were actually produced by the method employed in their isolation, and that the essential toxines are bodies not only many times more toxic, but also so unstable that they will stand only the least amount of chemical treatment; chemical methods which may be employed with impunity in the isolation of many very unstable compounds result in the destruction of these essential toxines of the bacteria. The first of these essential poisons to be studied was the diphtheria toxine, by Roux and Yersin, in 1888 and 1889, and shortly after that the tetanus toxine, by Kitasato These poisons, as isolated or partially isolated by these early observers, showed the presence of certain of the reactions of albumens, and were thought to belong to the class of albumens, and consequently were named toxalbumens. That this classification was correct, seems doubtful, as Brieger has shown that

the purer the state in which these poisons are obtained the less prominent is their albuminous character, but they are such unstable bodies that it is difficult to make out much of their chemical relationships. Their most prominent feature is their intense toxicity, which is many times greater than that of the ptomaines. A study of the toxines of diphtheria and tetanus show that they are undoubtedly responsible for the disease phenomena associated with these infections. Closely allied to these toxines were found to be the poisons ricin and abrin and snake venom. The experimental work of Roux, Behring and Ehrlich soon demonstrated that these poisons differed from other poisons in that the recovery from a non-fatal dose conferred a partial immunity to a larger dose, and that this condition of immunity could be enormously and rapidly increased by repeated, gradually increasing doses. The further discovery that this immunity resided in the plasma of the blood and passed into the serum, and that this serum injected into another animal conferred on it an immunity proportional to the amount of serum, and the degree of immunity of the animal from which it was drawn lead to the recognition of the anti-toxines, and the discovery of the anti-toxic treatment of these diseases. The discovery of the toxines and of the corresponding anti-toxines naturally stimulated to an enormous extent research along this line. The work of Pasteur upon anthrax, chicken cholera and other infections rested upon methods of immunity production by the introduction of weakened or killed organisms of disease, and aimed at producing in the animal a condition similar to that which results from the attack of an infection. It was, in fact, the production of an active immunity in the animal. The work of Behring, Roux and Kitasato lead to a method of curing an already existing infection by a method of passive immunization, and from this naturally arose the hope that it might be possible to do the same for all infections. Investigation, however, soon showed that the problem was not so simple as at first sight appeared, and the first difficulty which was met with was that of finding for the other micro-organisms toxines comparable in their action with those of diphtheria and tetanus; it was naturally imagined that if in the case of cholera, for instance, the essential toxine could be found, it would not be a difficult problem following the same methods used in the diphtheria anti-toxine to discover an anti-toxine for cholera, and similarly for other diseases. But the first difficulty which was met with was the finding of this toxine. In the case of Asiatic cholera, although organisms of a high degree of virulence, that is infecting power, could be cultivated in the artificial media of the laboratory, yet in no instance was there found in these media a

poison at all comparable in its action with the poison which evidently was formed in the cholera patient and circulated in his blood. The culture media might show the presence of soluble poisons, but these were slight in amount as compared with a culture of the diphtheria bacillus. It remained for Pfeiffer to show that the essential cholera toxine is so intimately bound up with the body of the cholera spirillum that it is only liberated when this spirillum is disintigrating. The fact proved by Pfeiffer for the cholera organism was shown to be true of many others, such as the typhoid bacillus, the bacillus of tuberculosis and others. Pfeiffer's further studies showed that increasing doses of the cholera organism did not give rise to an anti-toxine such as had been found in the case of diphtheria, but to a condition of immunity to the infecting organism, and this leads to the distinction between toxine immunity and bacterial immunity. So far it has been the toxine immunity which it has been possible to push to such a high degree that it may be conferred passively upon another animal by the injection of the blood serum of the immune individual. The toxines which are so intimately associated with the bodies of the micro-organisms are apparently of the nature of nucleoproteids, and their most marked character is their slight solubility, as compared with the toxine of diphtheria; they are many of them equally unstable and are all exceedingly toxic, but the difficulty has been to understand how they acted in the body, since the laboratory experiments necessarily predicated that before the toxine could act the organism must be dead. Experiments on animals have shown that in many cases this was easily demonstrated. Staphylococci when carefully killed so as not to destroy their poison are still pyogenic; tubercle bacilli when killed and injected into animals still give rise to tubercles.

The investigation of all these different poisonous substances has naturally led to a more precise knowledge in regard to them and we have learned that they are not to be considered simple substances, but that in the case of each organism a number of different toxic compounds are formed. A good example of this is seen in the case of tetanus, where at least two well marked toxines have been discovered, one of which is neurotoxic, the other hæmolytic in its action.

The studies of Pasteur early showed us that the recovery from an experimental infection conferred a certain degree of active immunity and these observations were very soon extended to a large number of specific micro-organisms. For instance repeated increasing doses of the cholera spirillum established in the experiment animal a very high degree of immunity to it. It was natural that theories should be proposed to account for this condition which was so rapidly established.

One of the first to propose an explanation to the phenomena was Metschnikoff; as a result of observations upon a disease of certain crustaceans, in which a parasitic organism could be studied under the microscope in its method of penetration into the host and the reaction of the host to the parasite followed; in this it was seen that the chief method of protection of the little crustacean lay in the wandering cells of its blood which actively sought out the parasite and devoured them; a study of foreign bodies and bacteria introduced into higher animals showed that the same process took place in them, and as a result of these observations Metschnikoff proposed his theory of phagocytosis which proved one of the most fruitful hypotheses which has ever been introduced into the study of experimental medicine, not only on account of the facts that have been discovered to support it, but also on account of the opposition it gave rise to and the researches which resulted from that opposition. Indeed we may ascribe most of our present knowledge of immunity to the long struggle which has gone on continually between the upholders of this cellular theory of immunity and its opponents, the advocates of the humoral theory. The humoral view owes its development to an observation of Nuttal, that bacteria introduced into the serum of the blood rapidly died. There were, however, at first, great difficulties in the way of establishing this theory, because it was soon found that this bactericidal character of the blood serum of animals was of the most uncertain character and subject to most curious and inexplicable variations. In some instances it seemed to increase with immunziation, in others it did not, and it was a condition which was most unstable, being present in the blood immediately after shedding but, disappearing rapidly from the shed blood

In the course of his observations upon cholera, Pfeiffer of Berlin made an observation which proved a key to the riddle and paved the way to a l the advances of the past few years. He found that when the blood serum of an animal immunized against cholera was introduced into the peritoneal cavity of a non-immune guinea-pig along with a dose of the cholera spirillum rapid disintigration of the bacteria took place which could be followed readily under the microscope, by withdrawing from the cavity a drop of the exudate from time to time; it was seen that the bacteria rapidly broke up into granular masses and ultimately disappeared entirely. This intraperitoneal destruction of the organisms was known as Pfeiffer's phenomenon, and at first it was thought that it would not take place *in vitro*. It remained, however, for Metschnikoff and Bordet, working in the Pasteur Institute, to demonstrate that it would occur *in vitro* if the immune serum was fresh, or if to the mixture

of the immune serum and bacteria there was added a very small amount of the fresh blood of another animal. It was argued from this that the bacterial destruction seen in Pfeiffer's reaction was due to two substances, one of which was fairly stable, the other, however, disappeared on standing. Such an immune serum which had lost its bactericidal qualities on standing was described as an inactive serum, and when these qualities were restored to it by the addition of fresh serum, it was said to be reactivated. It was soon found, however, that a serum could be inactivated most readily by heating; a temperature of 55°C for thirty minutes being sufficient for this purpose.

The importance of these observations became more apparent when the attention of the investigators was turned to the action of blood serum upon other cells than bacteria. It had long been known that when the red blood cells of an animal were mixed with the serum of an animal of another species that they were dissolved; from the color change which took place owing to the passage of the hæmoglobin into the serum, the blood was said to be laked. Now it was found that if the red cells of an animal were injected into another animal in gradually increasing doses the serum of the second animal gradually acquired an enormously increased power of laking the cells of the first animal. For instance, if, say the serum of a guinea pig lakes the corpuscles of the hen in a given strength in a given time, after treating the guinea pig with the hens corpusles by intraperitoneal injection for some months, it is found that the serum will lake the corpuscles in the same time in solutions containing perhaps only one-hundreth as much serum; that, in fact, the serum has acquired an enormously increased destructive action upon the corpuscles. This has been called hæmolysis, as the destruction of bacteria in the immune serum has been called bacteriolysis. This condition, it has been shown, can be produced not only for bacteria, or red blood cells, but also for almost any other cell of the body, so that by adopting similar methods it is possible to obtain sera which are leucocytolytic, neurolytic, nephrolytic or spermatoxic. In every case the active condition in the blood serum has been produced in exactly the same way in which immunization is produced for a specific bacterium. It was natural to suppose that the changes which took place in the blood serum were similar, and the compounds which were formed were of a similar character. It was indeed an easy matter to demonstrate that, for instance, in the case of the hæmolytic serum there was present a fairly stable body which was not destroyed by heating to 55°C for thirty minutes, and a second body which was so destroyed, but which could be restored by adding the fresh serum of another animal. This

proved to be true of all the lytic sera, so that these new observations served to bring the question of immunisation into line with a much broader question.

It will be seen that the phenomena of solution of a cell in a foreign serum was due first to a body which was formed in the serum by the previous injection of numbers of the cells and a second body which was apparently pre-existent in the serum which was very unstable, but which could be again restored by the addition of the fresh serum of another animal. The specific substance has been called immune body or the intermediary body, whilst the other substance has been called the compliment or addiment. Both are necessary for the destruction of a foreign cell in the blood, but the intermediary body is specific, whilst the complimentary body or bodies are common to the blood of all healthy animals. It is evident that the discovery of these facts had a very great influence upon our views in regard to immunity; it especially seemed at first sight to entirely destroy the significance of the phagocyte as a factor in determining bacterial immunity; but those who support the view of the role of the wandering cells of the blood in the production of immunity have not given up their views, but have modified them from time to time to suit the new facts which were discovered; indeed, as stated above, most of the knowledge which we now have has been the result of the continual struggle between the advocates of the humoral and cellular theories of immunity, and there is perhaps nothing more interesting in the whole history of the subject than the ingenious manner in which Metschnikoff and his school have been able to turn the arguments and facts of their opponents to the support of their doctrines.

The phagocytic activity of the leucocytes and of other cells of the body, such, for instance, as the endothelial cells is recognized and accepted now by all pathologists. In the phenomena seen in inflammations, as recently described anew in the works of Marchand and Maximow, we see how well recognized is the process of phagocytosis. In explaning the condition of natural immunity as distinguished from acquired immunity, the role of the phagocyte must be recognized also, but in regard to this question of acquired immunity it seems at first as if the importance of the leucocyte had been over-estimated. Metschnikoff, has, however, gradually altered his views to suit the newer facts discovered in regard to acquired immunity, whilst still maintaining the influence of the leucocyte, and he now looks upon the substances found in the blood serum which have been described above, as derived from the leucocyte by a process of disintegration which he calls phagolysis. In re-

gard to the so-called compliment it is possible that he is right; Bulloch has shown that the compliment can be temporarily increased by the production of a leucocytosis. On the other hand, it seems improbable that the wandering cell is the source of the immune bodies, although this is a question which is still far from settled. It will be seen that in the determination of an active immunity to an infection it is only necessary to stimulate, by repeated injections of the microorganism, the production of the specific immune body. This is what Pasteur did in his anthrax immunization. This is what is done when Haffkine's plague vaccine or cholera vaccine is used as a protection against these diseases, and this is probably what takes place normally in the course of every infection. Indeed, in typhoid fever it has been shown that the immune body begins to appear in the blood about the end of the first week of the disease. But in every case, in order that one may have bacterial destruction there must be a sufficient amount of complimentary bodies, and the means of production of these has not yet been discovered, although, as mentioned above, there seems for some of them to be a connection between their appearance and leucocytosis. In regard to the conditions which will destroy the compliments, however, we know more. It has been shown, for instance, that necrotic tissue will take the compliment out of the blood with great rapidity, and this will appeal at once to the surgeon as explaining many of the facts of experience in regard to the influence of necrotic tissue on the healing of wounds Work recently done in the hygienic laboratory of the University of Pennsylvania has shown that alcoholic poisoning in rabbits leads to a destruction of the compliment, and in the pathological laboratory of the same University they have found that in certain morbid states, as, for instance, in uræmia the the compliment disappears from the blood, and renders it probable that terminal infections first described by Flexner owe their development to the disappearance of the compliment, with the consequent loss of bactericidal properties of the blood, and consequently a loss of normal immunity. How we are to increase the amount of the complimentary bodies along with the intermediary or immune bodies sufficiently to be able to confer a passive immunity upon an individual by the injection of the blood serum of an immune animal, as has been done in the production of passive toxine immunity in diphtheria, remains as yet the goal towards which investigators are striving.

Perhaps not the least interesting result of these modern investigations upon immunity has been the theories proposed by Ehrlich to account for the facts so far discovered. These theories are the result of the application by Ehrlich of the facts of modern stereochemistry to

the chemistry of the cell. He suggests that we consider the essential molecule of the cell as nuclear ring with a series of side chains comparable to the central nucleus of an aromatic compound, with its side chains consisting of hydroxils or other atomic complexes. He supposes the central nucleus to contain the regenerative power which is characteristic of the protoplasmic molecule and the side chains the mechanism by which the nutritive molecules are taken into the cell. Now it is evident that a bacterial product is poisonous only in so far as it will enter into combination with the cell molecule Practically we know, for instance that the toxine of tetanus is harmless for the hen, and it has been demonstrated that for several days after a large dose of tetanus toxine has been injected into a hen there is enough of the poison circulating in the blood to kill many hundred susceptible animals. It does not harm the hen because it does not enter into combination with its cell molecules. Ehrlich argues also that we cannot conceive of a cell having side chains specially adapted for taking hold of poisonous molecules, but that these do combine with the cell because they are sufficiently like the normal nutritive molecules to enter into combination with the cell side chains. When this combination does take place however there results a destruction of the chains in question and probably also of other parts of the molecule; if there are a sufficient number of these toxine molecules the death of the cell is the result, but if there are only a small number only a partial destruction is the result, and the injury is repaired by the production of new side chains of a similar character, thanks to the regenerative power which is inherent in the living molecule. Weigert has shown however that regeneration of destroyed cells always takes place in excess of the amount of the destruction; there are more cells formed than destroyed, there is more tissue reproduced than enough to supply the loss; it is indeed a well known fact in general pathology this one of over regeneration. Ehrlich imagines therefore that when the side chains have been destroyed by the action of the toxine that the regeneration will be more than enough to supply the loss and if the destruction be continued by the injection of new doses of the toxines there will be a new destruction of side chains, again an over regeneration and so on until so many side chains have been formed that they no longer remain attached to the central nucleus but are swept off into the blood stream and appear there as the antitoxin. He conceives the toxine as containing two essential atomic complexes as essential to its toxicity, one the haptophore complex which unites it to the protoplasmic side chain and the other the toxophore complex which enables it to produce the damage to the molecule.

For the explanation of the condition of acquired bacterial immunity, or for the production of a specific lytic serum, he elaborates his hypothesis somewhat as follows, still considering it in the light of a nutritive phenomenon. The protoplasmic molecule is provided with side chains which have two haptophore groups, one which will combine with and hold the introduced molecule, whether it be a bacterial cell or a nutritive molecule, and the other which will combine with certain ferment-like bodies which are circulating in the blood and which resemble the toxines in this respect that they have a haptophore apparatus which binds them to the side chain, and a ferment-like apparatus which enables them to destroy the molecule caught by the other haptophore group of the side chain. This ferment-like apparatus he calls the zymotoxic portion. He conceives the process which takes place during active bacterial immunization as follows: The introduced bacteria, say the typhoid bacillus is caught by the side chain, and at the same time an equivalent amount of the complimentary body, the result is that the zymotoxic portion of the compliment is brought into action on the bacillus or its protoplasmic molecule and it is dissolved; the more bacteria are brought in the more these side chains are used up, and following the same reasoning as in the case of the toxine the side chain is regenerated. These are again destroyed and so the cell is stimulated to production and then to overproduction of side chains until these separate from the central nucleus of the molecule and so appear in the blood as the intermediary bodies or immune bodies. To the side chains which appear as the antitoxines Ehrlich gives the name of receptors of the first order. To those which appear in the blood as the intermediary bodies he give the name receptors of the third order, or from their possesion of two haptophore complexes, the one for the bacterial cell and the other for the compliment, amboceptors.

It will be seen that there must be innumerable receptors of the third order as they play a part, not only in the comparative unimportant process of immunization, but also in the much more important process of cell nutrition. In regard to the complimentary bodies however there has been a difference of opinion as to whether they were few or many. The fact that the serum from many different animals could be used to reactivate a specific immune serum lead some observors to consider them as simple compounds common to a number of different animals, but the most recent investigations of Ehrlich's laboratory seem to definitely show that they must be very numerous, with varying grades of affinity for the receptors which are produced in the immunization experiments.

These theories of Ehrlich's seem so extraordinary to one who is not familiar to the results of the recent investigations in bacteriology that it

is difficult to convey in a short article any idea of the complete manner in which they fit all the facts. For many of his hypotheses he has very strong support in the behavior of certain of the compounds known in organic chemistry, and his hypotheses have this decided merit, that they include the explanation of the problem of immunity only as a subdivision of the much larger problem of nutrition. A hypothesis is only of value in so far as it serves to stimulate investigation, and this one, has been, and is, eminently successful in this regard. How far it will carry us, or how soon it will have to be modified we cannot tell, but there cannot be the slightest doubt that its influence will be far reaching, not only in Pathology but also in the whole field of Biology. It would lead us too far and would render this article altogether too long to give an account of the various other bodies which have been found as the result of these investigations, such as the agglutinins, the precipitins (these latter having the very practical importance of giving us at least a perfectly certain method of recognizing human blood), or of anticomplements or antiferments, but all of them are explained by and have been used by Ehrlich in the elaboration of his hypothesis. We may say, in closing that not since the Darwinian theory has there been given to biology an hypothesis so far reaching in its consequences and its influence as this of Ehrlich's.

TWO CASES IN PRACTICE, AND AN INTERESTING BOOK.

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An Unusual Case of Intussusception

LEA WING, a chinese infant of nine months, with a history of ten hours pain and several passages of bloody mucus. A Sausage-shaped mass could be felt over the descending colon ; per rectum, the invagination was found to be within two inches from the anus. After considerable delay and much persuasion upon the part of one of the local lady missionaries, I obtained consent to operate. The invagination was the most extensive in the annals of our hospital work, including the cæcum, the ascending and transverse colon with equal length of the ileum completely prolapsed within the descending colon and rectum. A careful attempt was made to withdraw the prolapsed part, but such resistance was met with that rupture seemed imminent and another method which was found satisfactory, viz., grasping the part of the bowel below the prolapsed part and carefully compresing in an upward milking manner. By this means the rectum, colon and cæcum were

treated till the invagination was reduced. Adhesions had formed for about three inches on either side of the ileo-cæcal valve, showing this part of the invagination to be of longer standing than the other part. The constriction had interfered with the nutrition of the lower end of the cæcum and four inches of the ileum. This I resected and united with a Murphy button, overstitched with silk. The colon was anchored to the anterior abdominal wall to prevent a recurrence of the prolapse.

The child lived five days. A post-mortem showed complete union of the bowel, with gangrene of three inches of colon adjacent to the button, caused by thrombosis of a branch of the mesenteric artery. There was no general peritonitis, nor pus at the region of the union. Had the resection included the whole of the transverse colon, the child's life would probably have been saved, but at the time of operating there was no reason to suspect any interference with the nutrition of the bowel past the part of section. The bleeding of the part when cut seemed to indicate that the circulation was not interfered with.

The delay in operation due to the prejudices of the parents, the amount of manipulation and the extent of the section, with five days post operative life, coupled with the satisfaction of no peritonitis gives encouragement to the surgical treatment of these cases. It is needless to state that manipulations within the abdomen of an infant are somewhat more difficult than in the adult, but with early operation and carefull examination of the bowel as to its nutrition, we should expect recovery in all but enfeebled cases.

Imperforate Rectum, Operation, Recovery.

The rarity of this malformation, coupled with the greater rarity of successful operations for the relief of the condition, renders this case worth reporting. This is but the second case of malformation of the bowel that has come under my observation in eighteen years of practice. The former, a well nourished child was allowed to die without any attempt being made to overcome the defect.

The subject of this report, a male infant, was the third child of healthy parents, the other children were normal in every respect. The father had web toes which was reproduced in this child, otherwise it was normal with exception of the bowel deficiency. It was well nourished and vigorous and weighed seven pounds. Accouchment was rapid, breech presentation, and liquor amni colorless, nothing unusual was noticed regarding the child until my second visit. When the nurse informed me that the child had not passed anything from the bowels

An examination showed the anus well formed and the rectum one and one half inches in length ending in a blind sac. There was considerable abdominal distension, with shallow respiration. The following morning, thirty-five hours after birth, under chloroform, the rectal sac was dissected through the interior of the abdomen and explored with the little finger. There was absence of any fibrous connection between the lower segment and the parts above. A large semi-functuating ovoid mass was felt completely filling the lower abdomen. As I wished to locate the lowest part of the bowel and not feeling certain that I had accomplished my object, the abdomen was opened in the left lumbar region showing the bowel ending in the distended sac that had been felt through the rectum No other malformation was found. A haemostat was then inserted through the rectum, and the lower part of the distended bowel sac gradually brought out through the lower segment and anus, and attached to the surface. The bowel was then opened and several ounces of meconium with flatus escaped. The abdominal distension was immediately relieved, circulation and respiration becoming normal. A rubber tube was left in the bowel. The child slept well, and had several passages from the bowels during the next twenty-four hours when the tube was removed. Convalescence was interrupted with the exception of constriction at the junction of the upper segment, this was overcome by dilitation with the little finger continued daily by the nurse. The child continues to develop normally.

The actual causation of congenital malformation is beyond solution, but the predisposition to malformations in connection with the alimentary tube can be readly demonstrated by reference to the embryological development. The upper two thirds of the rectum are formed from the abdominal (hypoblast), part of the primitive intestine, the lower third is formed from the external layer (epiblast) of the blastodermic membrane. The failure of these two parts to unite into one continuous tube constitutes the deformity that was present in this case.

Since the liquor amnii obtains its coloring matter principally from the meconium discharged in utero, it would be well to examine the anus and rectum in all cases in which the " waters " are of a lighter color than the ordinary, brownish shade. Recovery after operations in these cases is the exception, but with the application of ordinary surgical principles, as early as possible before abdominal distension has seriously menmaced respiration and circulation, there is reasonable hope of success. We have not discharged our duty until an attempt has been made to rectify the defect.

An Interesting Old Book.

It is always instructive and frequently interesting to take a retrospect in medicine. An opportunity has been afforded me in this direction by falling in with a copy of "Wesleys Primitive Physic," bearing the date of 1747. This work seems to have enjoyed no little popularity, since it ran through three editions, at last appearing in 1760. The preface is somewhat lengthy, and surcharged with religious theories that will compare in their reasonableness with many of the startling prescriptions which the work contains. While no doubt exists that medical science was in a condition of extreme imperfection, there is evidence that the author has used no small amount of descretion in his selection of prescriptions, since after many of the prescriptions appears the word, "tried."

It is difficult to harmonize some of the writers sentiments with reference to original man "clothed in body as in soul with mortality and incurruption" with his conception and evolution as stated in his "Survey of The Wisdom of God" in which he states "The ape is the rough draft of man. Mankind have there gradations as well as other productions of our globe. There are a prodigious number of links between the most perfect man and the ape", but since this quotation bears the date of 1775 we are assured that this eminent theologian waxed in knowledge as well as in grace as the shadows began to lengthen.

With reference to the presence of suffering in the world, and the attitude of Nature towards the sufferer, the author says "Man rebelled against the Soverign of Heaven and earth"—"The seeds of wickedness and pain are now lodged in our inmost substance. The heavens the earth and all things contained therein conspire to punish the rebels against their Creator. The sun, the moon shed unwholesome influences from above, the earth exhales poisonous damps from beneath, the beasts of the field, the fowls of the air, the fishes of the sea are in a state of hostility, yea the food itself we eat daily saps the foundation of a life which cannot be sustained without it,"- a condition of depravity of the elements hardly consistent with their behavior in our day. In answer to the question can anything be done to soften the evils of life he says "Without question there may. One grand preventive of pain and sickness seems intimated by the Author of Nature in the very sentence that entails death upon us 'In the sweat of thy face shalt thou eat bread, etc.' The power of exercise both to preserve and restore health is greater than can well be conceived."

The reference to the beginnings of the healing art shows that the author had but little confidence in the "educated" physician of his day. After discussing the roll played by tradition in both religion and medi-

cine, and the results of experiment he says "Thus ancient men having a little experience joined with common sense and common humanity, cured both themselves and neighbors of most of the distempers to which every nation was subject. But in process of time, men of a philosophical turn were not satisfied with this they began to enquire how they might account for these things. How such medicines wrought such effects. They examined the human body in all its parts, the nature of its flesh, veins, arteries, nerves, the structure of the brain, heart, lungs, stomach and bowels, with the springs of the several kinds of animal functions. They explored several kinds of animal, mineral, as well as vegetable substances, and hence the whole order of physic became gradually inverted. Men of learning began to set experience aside, to build physic upon hypothesis, to form theories of disease and their cure, and to substitute these in the place of experiment. Physicians now began to be in admiration as persons who were something more than human. And profit attended their employ as well as honor, so that they had two weighty reasons for keeping the bulk of mankind at a distance that they might not pry into the mysteries of the profession. They filled their writings with abundance of technical terms, utterly unintelligible to plain men. They represented the critical knowledge of astronomy, natural philosophy and what not. And thus honor and gain were secured, a vast majority of mankind being utterly cut off from helping either themselves or their neighbors, or even daring to attempt it."

Here are a few of the prescriptions.

For an Ague.—Go into a cold bath just before the cold fit—Nothing tends more to prolong an ague than indulging a lazy indolent disposition. Children have frequently been cured by wearing a waistcoat in which bark was quilted. Or, apply to each wrist a plaister of treacle and soot.

Canine Appetite, which is an insatiable desire for eating, if it be without vomiting is often cured by a small bit of bread dipped in wine and supplied to the nostrils.

An Asthma.—Live a fortnight on boiled carrots only. Or take an ounce of quicksilver every morning and a spoonful of acqua sulphurata.

A Cancer of the breast of thirteen years standing was cured by frequently applying red poppy water, plaintain and rose water, mixed with honey and roses. Use the cold bath, this has cured many. This cured Mrs. Bates of Leicestershire of a sciatica, cancer of the breast, a consumption, and a rheumatism which she had for twenty years. She bathed daily for a month and drank only water. Or apply goose dung and celandine. beat well together and spread on a fine rag. Dr. Chene says, a total ass-milk diet about two quarts a day without any other food, will cure a confirmed cancer.

A Consumption.—Take no food but buttermilk, churned in a bottle, and white bread. I have known this successful. Or every morning, cut a little turf of fresh earth and laying down breathe in the hole for a quarter of an hour. I have known a deep consumption cured by this.

The Cramp.—To prevent, tie your garter smooth and tight under your knee at going to bed—it seldom fails; or lay a roll of brimstone under your pillow. The cramp, to cure, strongly put out your heel, or hold a roll of brimstone in your hand.

The Dropsy.—After giving several perscriptions a case as given:—"Jane Roberts, aged twenty, was at length constrained to take to her bed by a confirmed ascites and anasarca. In this desperate case she drank as much as she could, first of small beer, and when that failed—milk. After a while her skin cracked in many places, and she continued drinking and leaking until she was quite well."

Green Sickness.—Take an ounce of quicksilver night and morning.

The Iliac Passion.—This is a violent kind of cholic, the excrements are supposed to be thrown up by the mouth in vomiting. Take ounce by ounce, a pound, or a pound and a half of quicksilver, or hold a live puppy constantly on the belly.

Lunacy.—Take daily an ounce of distilled vinegar.

A Windy Rupture.—Warm cow dung well spread thick on leather, strewing some pumpkin seeds upon it and apply hot. When cold, put on a new one. It commonly cures a child (keeping it in bed) in two days.

The author was a firm believer in the cold bath, as a preventive of many diseases. Wise parents should dip their children in cold water every morning till they are three quarters old, and afterwards their hands and feet.

In conclusion, the author advises "all to buy their medicines at Apothecaries Hall. There they are sure to have them good."

A PLEA FOR THE OPEN METHOD OF TREATING FRACTURES OF THE PATELLA.

By F. N. G. STARR, M.B.,
Demonstrator of Anatomy, Medical Faculty, University of Toronto.

MR PRESIDENT AND GENTLEMEN,—About two years ago I read a paper before this society on the "Open Method of Treating Fractures." In the course of that paper I related a series of cases in which by various manipulations it was impossible to secure accurate approximation of the broken fragments, and because of this I had cut down upon the recent fracture, brought the fragments together, and secured them by means of silver wire. Of course it was urged against this procedure, that I had converted a simple fracture into a compound, and that such practice is to be deplored. With a still further experience in such cases, I desire to repeat here what I then contended, that an aseptic compound fracture with accurate apposition tends to a much better result than a simple fracture left to unite in a faulty position, with all its associated deformity and loss of use.

While I think I shall never be guilty of advising the open method of treatment for all fractures of the patella, I am inclined to advocate this method in all cases, and for the following reasons: first, the fact that by this method one secures bony union. Second, that the period of convalescence is shortened from three, or even six months, to from three to six weeks. Third, that bony union never occurs in cases treated by the use of the time-honored splint and the various mechanical devices, because of the tension caused by the swelling and blood clot in the joint, and because of the fact that the periosteum is never, or rarely, torn at the same level that the patella is broken, and it therefore overlaps the fractured surface. Fourth, that in cases in which fibrous union occurs there is a tendency for the fragments to become further separated when the sufferer begins to walk. Fifth, that when fibrous union has allowed sufficient separation to occur to give rise to awkwardness in walking it is then difficult to secure good approximation and an ideal result by an open operation, because of the atrophy that has occurred in the broken fragments. Sixth, that according to Dr. Powers (1) the results are satisfactory in 94 per cent. of the cases treated by the open method. His observations include seven hundred and eleven cases which he was able to collect.

My reason for bringing this subject before you is that upon several occasions, when I have advocated the treatment, I have been somewhat severely criticised for suggesting such a dangerous procedure. At the same time I feel that an apology is due to some surgeons here for

(1) Annals of Surgery, p. 67—July, 1898.

bringing such a well recognized practice before you, and for advocating it as if it were something new.

If one adopts the open method, however, he must be most careful of his preliminary preparation, for the smallest amount of neglect on his or the nurse's part, may mean the introduction of septic material into a cavity, more susceptible to infection even than the peritoneum, and the result would be an ankylosed joint, or the death of the patient from sepsis. Lister has said (2), "No man is justified in performing such an operation unless he can say with a clear conscience that he considers himself morally certain of avoiding the entrance of any septic mischief into the wound." As a "word to the wise" is sufficient I may add that certain men who frequently have occasion to blame the nurse or the house-doctor because of supperation will do well to leave these cases severely alone, lest the elasticity of conscience be too severely strained in conforming to Lister's injunction. In the cases collected by Dr. Powers (3) already referred to, there were two deaths from sepsis, two in which total ankylosis took place, and twenty-eight in which "marked stiffness and disability" resulted.

In the case that I shall show you this evening I adopted the vertical incision, but in future I shall use the "horse shoe" shaped incision, with the convexity looking upward, and for the following reasons: First, one then does not require to cut through the thickened skin over the patella, from the deeper layers of which it may be difficult to remove all septic material. Second, the buried silver wire sutures will not tend to irritate the skin wound. Third, the resulting cicatrix will be farther removed from the point of the knee.

The patient, a man, came to the General Hospital on November 15th, 1902, with the following history. He was standing up in an express waggon when the horse started forward, causing him to lose his balance, and while he was trying to regain his centre of gravity it stopped, throwing the man forward, his knee striking the iron binding on the box of the waggon. Thus he met with direct violence to the patella, at the same time that his extensor tendon was exerting considerable force on the bone. Upon attempting to rise he found his right leg useless. When examined, a transverse fracture was found at about the middle of the patella, into the space between the fragments three fingers could readily be placed. By means of a figure of eight bandage the space between the fragments could be reduced to about half an inch. For two days this bandage, with carefully regulated pressure over the knee, was continued till all the oozing that was likely to occur had taken place.

(2) Jacobson's Operations of Surgery, p. 652.

(3) Quoted in Jacobson's Operations of Surgery, p, 652.

Then the part was carefully prepared, and to make assurance doubly sure, it was again prepared on the table. Of the preparation of my own hands I was most careful. Both Dr. Primrose, who assisted me, and I made still more certain of our own cleanliness by wearing rubber gloves, a precaution that I consider a good one, providing that care has been taken in the preparation of the gloves, for gloves will stand boiling, but the hands will not.

By a vertical incision I cut down over the patella and cleared out a large quantity of clot from the joint. The fracture was almost as clean a dissolution of continuity as if divided by a saw. The periosteum and the lacerated fragments of the extensor tendon overlapped the raw surfaces of the bone. These were raised and some tags snipped away with scissors. Then two holes were drilled on each fragment from half to three-quarters of an inch from the edge of the fractured surface, taking an oblique direction, coming out on the raw surface just superficial to the cartilage, taking care to have the holes approximate accurately. Two heavy silver wire sutures were then passed through and drawn tight enough to bring together the broken fragments and made fast by two half turns and one full turn, the knots being hammered well down. A better plan I think would be to use a single heavy wire suture passing each end through the holes in the lower fragment from below up then through the holes in the upper, secure, apposition and fasten. This would have the advantage of but one knot and that would be well away from the point of the knee in the devotional attitude. I do not use any silk or cat-gut to bring the periosteum together, for fear of infection and because approximation was good without it. Our skin wound was then closed with fishing gut sutures without drainage, dressed antiseptically, and the limb made secure by means of a posterior splint with a foot piece. On the tenth day I removed the splint and took out the silk worm gut at stitches and found good union of the skin, then applied a plaster splint from the ankle to the groin, cutting it at the inside while still soft to make its subsequent removal easy. At the end of two weeks from the operation I completed the division of the splint, and allowed the splint to remain off while the patient was in bed, and had it applied when he was up. At the end of the third week he left the hospital, still wearing the splint when walking, and this he managed remarkably well. He has been more or less continuously at work ever since leaving the hospital.

Surely this, to the man who "earns his bread by the sweat of his brow," as well as the man to whom each day at business means thousands of dollars, is better than a prolonged convalescence of from three to six or even seven months.

THE OPEN AIR TREATMENT FOR CONSUMPTION.

By ANGUS MACKINNON, M.D., Los Angeles.

THE CANADA LANCET for April last contains a very readable paper by Sir James Grant, M.D., entitled: "How to live and prolong life." In that paper may be found the following words "The idea of a California climate for the treatment of tuberculosis is no longer considered a necessity in Canada. Fresh outside air, sun light and hygienic precautions are the chief requisites, all of which we have at a reasonable distance of our homes and firesides."

By way of contrast let me quote an American expert on climate, as follows: "The climate of Canada is too cold, damp and trying to be recommended. The eastern part of Canada especially is damp, chilly and most uncomfortable. However, there are some places where a limited class may derive some benefit during our heated season; the overworked business man, the melancholic, and the sufferer from liver troubles. Such persons may be advised to spend some time at some of the more favored summer resorts in that country, if accompanied by a young physician of a cheerful, happy disposition."

Was Sir James so far carried away by his love of country that his words must be taken with a good many grains of salt, did the "American expert, just quoted, but betray his entire ignorance?"

In the month of June, the American Climatological Association held its annual meeting in California, its sessions being held at one or more places in addition to Los Angeles. The association this year made a sort of tour of inspection of various health resorts in New Mexico, Arizona and California. The words having reference to Canada's climate are taken from a report of a paper read at one of the sessions held in Los Angeles. It is not stated that anyone challenged the truthfulness of the statement made.

The learned experts remained in Los Angeles several days, the guests of the medical profession. They were toasted and banquetted to no end, given free rides to many points of interest, not the least pleasurable being a drive through miles and miles of orange, lemon, apricot and other semi-tropical groves. After visiting Catalina Island, situated a few miles from the main land, the members headed northward, calling at several health resorts on the way to San Francisco, California's metropolitan city. At a banquet given by the medical profession there some of the members of the association gave a summary of their impressions of the places visited. Dr. Charles F. Mammack was chief spokesman. In view of the greater interest taken in

open air treatment at the present time, it is unnecessary to apologise for quoting Dr. Mammack as reported in the papers, as follows :

" Phoenix, Prescott and Maricopa, in Arizona, have the ideal desert climate, great dryness without disagreeable heat. They are worthy American substitutes for Egypt. Redlands and Riverside, in California, are very good for tubercular troubles, but are not good places for the poor invalid to make a living, as the land needs so much irrigation. Idyllwild sanatarium is a good refuge for invalids from the lowlands during the extreme hot weather of summer. Los Angeles is not particularly a health resort, but rather a distributing centre for more favored places.

" Catalina Island was visited to observe the effect of a sea climate. We were not much impressed with it as a health resort, but it is a fine pleasure resort. San Diego and Coronada, like Catalina, were visited during the summer fog season, and when least adapted to invalids, but I should imagine they would be very delightful for invalids at other seasons. Santa Barbara struck us all as being a place admirably adapted for invalids. Montecito Valley is an ideal place for the invalid. We thought it the best combination of all places we have visited. There I found Dr. William A. Flint, formerly of Bellevue Hospital, entirely recovered from tuberculosis after a residence of six years in Santa Barbara. Del Monte carried us away by its beauty, and old Monterey was very interesting.

" Santa Cruz is the first health resort where we found a fertile soil combined with abundance of water, a condition very desirable when recommending a certain locality to a poor man, who must go west to California to earn his own living and be cured of tuberculosis.

" The whole Santa Clara Valley impressed us as one of the grandest garden spots in the world, with its abundance of fruit and water and fertile lands—an ideal locality for plenty of employment for such persons as would have to earn their living when we sent them to California. Alum Rock, up in the hills, seemed like a nice, sheltered place with possibilities of popular development. Standford University inspired us with awe. That chapel is the finest thing of the kind I have ever laid eyes on, and I have been in all the great churches and cathedrals of Europe. The whole building scheme is a beautiful realization of the dream of life."

Sir James tells us that Canada has no use for California climate, for the reason that its own climate is all sufficient. A prominent member of a body of experts on climate, as we have seen, has pictured Canada's climate in a way fitted to create the impression that it is only fit for

bears and wolves, except for a short time in summer, when it is safe to send up there a New York overworked member of the stock exchange, provided he be "attended by a young physician of a cheerful happy disposition." Another climatological expert tells all the world that certain places in Arizona "have ideal desert climate—great dryness without disagreeable heat." Leaving Sir James and the New York expert on climate to settle their own differences, I am tempted to say a word about Arizona's climate, so much praised by Dr. Nammack. It is but charitable to assume that he visited the places mentioned very early, on an exceptionally cool day. I have conversed with several persons who lived in, and near, the places mentioned. Their testimony is to the effect that the winter climate is "ideal," but that the summer climate is past endurance. At Phœnix, and vicinity, the mercury keeps *above* 115 for months, often rising to 120, and even to 130, in the shade, Eggs cook in the sand, and the milkman drives the cow from door to door that be may deliver the goods in a condition fit for use. The people flock to Los Angeles and other California points to escape the heat of the summer months.

There really ought not to be any great divergence of opinion regarding the climate of a given place. Climate is not a psychological but a physiological condition, a thing to be seen, felt, ascertained. Local reports, for manifest reasons, are notoriously unreliable. What is needed is a thorough mapping of all health resorts in such way as to correctly classify, and, indicate, the merits of each in regard to specified diseased condition. Until a more perfect knowledge prevails, as in the past, so in the future, the suffering will be sent to the wrong place. The duty of constructing a reliable climatological map would naturally devolve upon national boards of health.

For the present purpose let the question of climate be limitated to the treatment of tuberculosis. Sir James in agreement with prevailing opinion, is an advocate of the fresh air treatment. By the way, this treatment is not a fad of the day, but an old treatment brought into greater prominence. It was advocated by the generation of doctors now fast passing away. Their fault lay in their not being sufficiently seized of its supreme importance; a fact which led to inadequate insistence in carrying it out. Here I would like to ask Sir James to explain how he manages to keep his patient in "out door air, day and night," in Ottawa climate. All the necessary conditions, he says, are near his home and fireside, so that he has no use for California climate. How to do that trick, is the one thing which the ordinary family physician in Canada, to-day, longs to know. He can do it with some measure of success from

May to October, but for the rest of the year he is confused, puzzled, aimless. To cause the patient to live in "out door air" during a week's eastern rein-storm, or for several months with the mercury ranging from 20 above to 20 or 30 below, may have basis in theory, but in practice is incapable of demonstration. Under such conditions drowning or freezing take precedence of cure. In conection with the open air treatment much prominence is given to the value of sanatariums. From the Muskoka cottages come reports of a high percentage of recoveries, all of which it is to be hoped is true. Without disparagement, may it not be asked, is there no pure air outside Muskoka, or Toronto? We all know there is. Then comes the query, why should a patient, living in the country, occupying a cottage, let us say, surrounded by everything needful, and at his home, which counts for much; why remove such a patient to a Muskoka cottage "to breath out door air, day and night?" Why not do that trick in his own cottage, where his slumbers are undisturbed by a chorus of coughing, or his waking hours made miserable by apparitions of death as his constant companions? Moreover, to one sufferer who goes to a sanatarium, voluntarily or involuntarily, a hundred must be treated at their homes. What does this show? What but that *home treatment* deserves far more consideration than it is the custom of the hour to bestow upon it. By turning their attention, for a time at least, to this all important phase of the question, the experts, if able to help out the family physician, would become the subjects of many blessings.

Here I record my disbelief in conditions, or systems, claiming to make it possible, in damp, cold climates, to breathe "out-door air, day and night," in comfort and safety. Artificially heated air is no longer "out-door air;" not, at least, without an elaborate heating system. A short time ago the papers reported that a preacher, somewhere near Toronto, wintered in a tent. If the tent admitted freely out-door air, there is good reason for believing that the preacher imitated the Indian in drawing his blanket very closely about his head, in which case he might better be in his room. Any serious attempt in this direction, in a cold climate, involves the very serious drawback of separating the patient from his family, a thing in itself most injurious and undesirable. The last point here, and I write to emphasize it: While not able to attain to the ideal, in a cold climate, yet that the aim should be to approximate that ideal as nearly as conditions and available appliances permit. Sanatariums have their place, but *home sanatariums* are still more important, and a much greater necessity.

To show that I am not speaking without some knowledge of the subject, I may state that I practiced in Western Ontario for over thirty

years, during which time I had my fair share of consumptive patients. I recognized early the value of fresh air as a prime factor in treatment, but never had been able to devise means by which my patients could inhale "out door air, day and night," the year round, or for any considerable part of the year, although constantly admonished by high authority. It is more than a year since I came to California, to remain temporarily or permanently, according to choice or circumstances. The climatic conditions, of course, are entirely different, and altogether in favor of California as to out-door treatment. While California has all climates within narrow compass, due to sea and mountain, yet it has its favored spots for out-door life the year round. Dr. Nammack is quite correct in stating that Los Angeles is not, properly speaking, a health resort, but rather a "distributing point for outlying places." Los Angeles, however, is a resort of another kind. The eastern winter tourists are variously estimated at from fifteen to twenty thousand, while summer tourists from the south-eastern States, are quite numerous. Having resided here through the four seasons I am able to speak for this valley. So mild are the winters that even a slight frost is phenomenal. The official report gives 72° as the average for August for twenty years. The sea breeze is constant after 10 a.m, and the nights are invariably cool. Rain seldom falls except in the winter months. Even then sunshine is so perpetual that neither the ground nor the air is long damp or disagreeable. Here the open-air treatment presents no difficulties. It is not necessary to insist on people living out doors, for that is their habit, and as for the night, a south-westerly apartment, having large open windows, gives absolutely pure out-door air. Tenting in the valleys, or in the mountains, according to the season, is possible and agreeable in all seasons. A light fire at times feels comfortable, but is not at all a necessity. The all but perpetual sunshine is an element of the utmost value. In the light of these facts and comparisons, I cannot give assent to Sir James' statement, namely that Canada has all the "needed requisites," as regards climate, and therefore has no use for California's climate. Not only Canada but the whole continent has use for California's climate. Nowhere else are found climatic conditions so perfect. In saying this I know full well that the few alone can avail themselves of the benefits which it offers. In the early stage, in the case of the fairly robust, Alberta is probably a good second to California. The air, though cold for a short time, is dry and invigorating, and sunshine almost as constant as in California. After all said and done, the duty of the hour in all Canada is the study of home treatment.

At the risk of being tedious, I add a few words about Los Angeles. It is situated about five hundred miles south of San Francisco, and is the commercial centre of Southern California. All roads lead to it. Seventy years ago it had ten thousand of a population. To-day it has 120,000, and is still growing at a surprising rate. It is a city of homes, of beautiful homes, occupied mainly by people of means, lured here by the climate from their former homes. The city is located in the Cauhuenga Valley, some fifteen miles from the sea, and is set mostly on hills, at an elevation of three to four hundred feet above the sea. The valley is anything but flat. It is even hilly, although bordered on three sides by mountain ranges, themselves separated by prosperous inhabited valleys. Hence it is that within twenty miles of Los Angeles there are several towns, and even cities, where the summer heat is rather trying. Again, there are mountain towns where the winters rival those of Ontario. One of the most surprising things to the newcomer is the tree growth, which is of varieties entirely new to him, being semi-tropical. To the easterner California is a new world. The greatest drawback is the light rainfall. That, of course, makes "climate," and climate is found to be a good paying asset. Fruit and climate are the two great industries of Southern California. Irrigation is the science of moisture chiefly relied upon. Great things are expected to follow the inauguration of government irrigation works and the opening of the Panama canal.

ETIOLOGY OF TUBERCULOSIS

Dr. Arthur Latham, in the November number of the Edinburgh Medical Journal, makes the following statement in his article:—

Hereditary tuberculosis is so rare as to be a negligible factor. It is not proved that tuberculous patients hand down to their children tissues which are especially receptive to tuberculosis. Tuberculosis always results from a pre-existing case of the disease, and the bacilli are conveyed by the mouth-spray, by the expectoration, or other discharge, and by means of food stuffs, more especially milk. It is improbable that infection often takes place from air respired through the nasal passages. The tubercle bacilli, whether the infection is through the air or food, enter the new host by the mouth in the majority of cases. The bacilli may then be destroyed by the natural defensive actions of the body in the respiratory and alimentary tracts, or they may pass into the various parts of the body.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. Mackenzie, B.A., M.B.

POTT'S DISEASE

In *The Post-Graduate, January*, Taylor gives notes of 40 cases of Pott's disease treated with the well known spinal support that bears the name of his namesake, Charles Fayette Taylor. All of these cases have been under observation for extended periods, so that the elements of cure, cessation of disease and correction of deformity may be estimated. He concludes from this investigation:

In thirty-nine cases treated in private practice by the use of the Taylor apparatus, where the cases were observed and the deformity recorded for ten years or more, it was found that:

1. The application of spinal support was nearly always promptly followed by the relief of pain and other acute symptoms, and by improvement in the general health.

2. The disease was cured in thirty-three, and that in a considerable number the cure was practically perfect as regards health, figure and function.

3. The result was good as regards deformity in half the cases, thirteen cases showed arrest or decrease of deformity.

4. As regards the final amount of deformity, the location of the disease was more important than any other factor, the cervical region being the most favorable, the lumbar next, and the dorsal the least.

5. It was necessary to continue spinal support in most cases, long after the pathological cure, owing to the tendency to increase of deformity from static conditions.

6. Ankylosis is therefore later, rarer and less extensive than is usually assumed.

PERCENTAGE SOLUTIONS.

With table of Parts and Percentage Equivalents based on the Apothecaries' Weight.

An accurate working-table of parts and percentage equivalents, for guidance in making solutions, etc., is undoubtedly of decided advantage to the busy pharmacist in his prescription laboratory, and a useful aid to his apprentices. A mistake in mental arithmetic is possible with any one, no matter how conversant he may be with weights, measures and the calculation of percentages based on weights or meas-

ures; and at the dispensing desk, where accuracy and rapidity are essential, a moment saved is often of utmost importance.

A table embodying the foregoing requirements, based on the apothecaries' weight is herewith presented. The percentages are graded from $\frac{1}{10}$ of 1 per cent. to 50 per cent—or their equivalents in parts, from 1 in 1,000 to 1 in 2; and the quantities from 20 minims to 32 fluid ounces.

Parts	Per cent.	20 mln.	℈. ℏ. dr.	ij. ℏ. dr.	ij. ℏ. dr.	iv. ℏ. dr.	v. ℏ. dr.	vj. ℏ. dr.	vij. ℏ. dr.	℈. ℏ. oz.	ij. ℏ. oz.	iij. ℏ. oz.	iv. ℏ. oz.	v. ℏ. oz.	vj. ℏ. oz.	viij. ℏ. oz.	xij. ℏ. oz.	xvj. ℏ. oz.	xxxij. ℏ. oz.
1 in 1,000	1/10	1/50	3/50	3/25	1/5	1/4	3/10	9/25	3/7	1/2	1	1 1/2	2	2 2/5	3	3 7/8	5 3/4	7 3/4	15 1/3
1 in 900	1/9	1/45	1/15	1/7	1/5	4/15	1/3	3/8	7/15	8/15	1 1/5	1 3/5	2 2/15	2 2/3	3 1/5	4 1/4	6 2/5	8 1/2	17
1 in 800	1/8	1/40	3/40	3/20	3/13	3/10	3/8	1/2	7/13	3/5	1 1/5	1 4/5	2 2/5	3	3 3/5	4 4/5	7 1/5	9 3/5	19 1/5
1 in 700	1/7	1/35	3/35	1/6	1/4	1/3	3/7	1/2	3/5	3/4	1 2/5	2 1/6	2 2/3	3 3/7	4 1/9	5 3/5	8 1/4	11	21 6/7
1 in 600	1/6	1/30	1/10	1/5	3/10	2/3	1/2	3/5	7/10	4/5	1 3/5	2 2/5	3 1/5	4	4 4/5	6 1/5	9 3/5	12 4/5	25 3/5
1 in 500	1/5	1/25	1/8	1/4	1/3	1/2	3/5	3/4	7/8	1	2	2 7/8	3 7/8	4 4/5	5 3/4	7 3/4	11 1/2	15 3/8	30 3/4
1 in 400	1/4	1/20	1/6	1/3	9/20	3/5	3/4	9/10	1 1/20	1 1/5	2 2/5	3 3/5	4 4/5	6	7 1/5	9 3/5	14 2/5	19 1/5	38 2/5
1 in 300	1/8	1/15	1/5	2/5	3/5	4/5	1	1 1/5	1 2/5	1 3/5	3 1/5	4 4/5	6 1/5	8	9 3/5	12 4/5	19 1/5	25 3/5	51 1/5
1 in 200	1/2	1/10	3/10	3/5	9/10	1 1/5	1 1/2	1 4/5	2 1/10	2 2/5	4 4/5	7 1/5	9 3/5	12	14 2/5	19 1/5	28 4/5	38 2/5	76 4/5
1 in 100	1	1/5	3/5	1 1/5	1 4/5	2 2/5	3	3 3/5	4 1/5	4 4/5	9 3/5	14 2/5	19 1/5	24	28 4/5	38 2/5	57 3/5	76 4/5	153 3/5
1 in 50	2	2/5	1 1/5	2 2/5	3 3/5	4 4/5	6	7 1/5	8 2/5	9 3/5	19 1/5	28 4/5	38 2/5	48	57 3/5	76 4/5	115 1/5	153 3/5	307 1/5
1 in 40	2 1/2	1/2	1 1/2	4 1/2	6	7 1/4	9	9	10 1/2	12	24	36	48	60	72	96	144	192	384
1 in 33⅓	3	3/5	1 3/4	5 1/2	7 1/5	9 3/5	12	14	12 2/3	14 1/2	29	43 2/3	58 1/6	72	87 1/4	116 1/3	174 1/2	232 2/3	465 1/2
1 in 30	3 1/3	2/3	2	6	9	12	15	18	16	16	32	48	64	80	96	128	192	256	512
1 in 25	4	4/5	2 2/5	7 1/5	9	12	15	18	21	24	48	72	96	120	144	192	288	384	768
1 in 20	5	1	3	6	9	12	15	18	21	24	48	72	96	120	144	192	288	384	768
1 in 10	10	2	6	12	18	24	30	36	42	48	96	144	192	240	288	384	576	768	1536
1 in 5	20	4	12	24	36	48	60	72	84	96	192	288	384	480	576	768	1152	1536	3072
1 in 4	25	5	15	30	45	60	75	90	105	120	240	360	480	600	720	960	1440	1920	3840
1 in 3	33 1/3	6 2/3	20	40	60	80	100	120	140	160	320	480	640	800	960	1280	1920	2560	5120
1 in 2	50	10	30	60	90	120	150	180	210	240	480	720	960	1200	1440	1920	2880	3840	7680

Rule—To find the number of grains (apothecaries' weight) required to make a solution of any given percentage, first find the quantity of solution to be made, as given on the top line of table, then by referring to the percentage column, find the percentage desired. Draw lines at right angles on the table from the quantity and percentage figures selected, and the answer will be found where the lines intersect,

Regardless of the quantity of solution, etc., to be made, the salt or solid must displace its own weight of solvent. For instance, a fluid ounce of a 1 in 30 (or 3⅓ per cent.) solution of cocain must contain 16 grains of the salt, and a sufficient quantity of solvent to make 1 fluid ounce of finished product.

The table will also be found of service in the case of solutions of powerful alkaloids and salts, in determining at a glance the exact quantity of the medicament in each prescribed dose of the mixture. For example, take a prescription calling for 6 fluid ounces of 1 in 1,000 solution of iodin trichlorid, to be administered in doses of 1 fluid drachm. By referring to the table it will be seen, not only that 3 grains of iodin trichlorid are required to fill the recipe, but also that each dose of the latter—1 fluid dram—contains $\frac{3}{10}$ grain of the medicament.

If you want to make one ounce of a 1 per cent. solution, trace the j. fl. oz. column down, and the 1 per cent. line to the right until the two meet, and we see that 4⅓ grains would be necessary.—From the *Medical World*.

THE VALUE OF RECTAL ALIMENTATION.

In the January number of the University of Pennsylvania Medical Bulletin Esdall and Miller report the results of an investigation carried on in two cases nourished exclusively by the rectal route, with a determination of the absorption, nitrogen metabolism, and intestinal putrefaction.

The effectiveness of this method of nutrition has been variously recognized by the authorities. Some claim that all needs can thus be supplied for a long time, while others, and among them Ewald, Pepper, and Wood, believe that it is useful for only a limited period. If any food is absorbed, then we have a definite gain over complete starvation in those cases where the oral route is impossible; but the amount absorbed and the total gain or loss in the patient's condition must determine its value in those cases where operation is being delayed to improve nutrition or strength.

The two cases chosen for observation were admitted directly after the occurrence of grave gastric hæmorrhage, the indication for the exclusion of food by mouth was imperative; both were put upon three nutritive enemata per diem, 400 c.c. of milk and 6 eggs in 24 hours,—predigested, salt added to equal normal salinity, and Tr. opii. m. iij. added to the mixture. A cleansing enema was given 1 hour before the nutritive In both cases after the first day the retention was good, the alimen-

tation was maintained for eighteen days, but five days were allowed to elapse before a record was begun, so that food previously ingested might have no effect, and metabolism be accustomed to the changed conditions. The total nitrogen and fat in the enemata was calculated; the total fæces were collected daily, acidulated with sulphuric acid, and dried on a water bath, and five estimations of the nitrogen and three of the fat were made. The period of investigation in each case was six days, and the totals in the two cases were as follows (grammes):—

	Case I.	Case II.
Total nitrogen of urine	60·1882	76·6610
Total faecal nitrogen	29·0254	25·2610
Total nitrogen excreted	89·2136	101·922
Total food nitrogen	45·2717	48·1150
Faecal nitrogen	29·0254	25·2610
Nitrogen absorbed	18·2463 or 3·041 per diem	3·809 per diem or 22·854
Total loss tissue nitrogen.....	70·9673	79·068
Total fat in food	285·650	284·760
Total fat in faeces	246·770	189.50
Total fat absorbed	38·88 or 6·48 per diem.	95·26 or 15-87 per diem.

In both these cases rectal alimentation was quite inadequate as evidenced by the great tissue loss, and this was accompanied by an accompanying loss in weight and strength. Then the amount supplied cannot be increased arbitrarily as the bowel rebels. Expressed in calories we find the first patient absorbing food equal to 211·9 per diem, and the second 319, while their requirements would be about 2000.

With regard to carbohydrates, it has been claimed that sugar is readily absorbed, but tends to cause irritation, while starch is slowly transformed and absorbed as sugar. This result has been arrived at by finding but little carbohydrate returned in the faeces, but estimation of the respiratory quotient shows that while it is definitely increased when this form of food is given by the mouth, it is but little affected by administration per rectum. This fact has led Reach to suggest that the carbohydrates in the rectum are broken up by bacteria, and either absorbed or returned in the form of bacterial products, which are not included in the estimation. The estimation of the conjugate sulphates in the urine in the cases studied showed a great increase, which would seem to indicate that an abnormal amount of putrefaction was going on. Not only the carbohydrates are subject to this agency, but the proteids may have their nitrogen excreted as ammonia and the fats also, instead of

being absorbed, may be returned in a form unrecognizable in the faeces.

The value of the nutrient enemata in many cases is doubtless partly due to the water absorbed in this way. Moreover, recent experiments lend support to the claim that in many cases the amount of food necessary has been placed too high—·48 gramme of albumen per kilo being in cases sufficient, and so if the point of equilibrium be much lowered, the small amount absorbed from the enemata may maintain the balance. But it is the opinion of the investigators that rectal alimentation in most cases is but a slow mode of starvation, and that nutrition cannot in this way be improved to any notable extent.

SYPHILIS AS A CAUSE OF INSANITY.

At the recent meeting of the British Medical Association Dr. F. W. Mott opened the discussion on the above subject. Syphilis acted in many ways as a cause of insanity. The anæmia and toxæmia of the secondary stage were exciting causes. The over-dosing with mercury was also a factor. Among the morbid changes might be mentioned meningitis, gummata, arteritis, and periarteritis. Cases occurring within the first four years were usually very intractable. Cases in which endarteritis and gummatous meningitis were found, often resembled general paralysis. The most frequent symptoms were aphasia, word-blindness, word-deafness, ocular paralysis, nocturnal headaches, exaltation and depression, and epileptiform fits. Many of these cases were amenable to some extent to treatment. The action of syphilis in producing general paralysis was now well established; but this cause seemed to operate under the conditions of civilization. The savages did not suffer from general paralysis, though they often suffered from syphilis. Civilization favoured neurasthenia and nervous break down. Acquired and congenital syphilis was equally potent. General paralysis was a degeneration of the nerve elements similar to tabes dorsalis. The Argyll-Robertson pupil was the most common sign in both diseases. At least 70 or 80 per cent. of cases of general paralysis have had syphilis. The disease usually began about 13 years after infection. The disease was unknown where syphilis was unknown; and these patients were immune to syphilis. Juvenile general paralytics were almost invariably due to congenital syphilis. General paralysis was very rare among certain classes, among whom the incidence of syphilis was also very rare. The section on psychology passed a resolution to the effect that general paralysis is largely due to syphilis, and that every effort should be made to lessen the frequency of syphilis.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

THE TREATMENT OF CHRONIC PHARYNGITIS.

After having removed the nasal lesions of a mechanical nature (the most common cause of pharyngitis) and re-establishing nasal permeability, Savoire employs the following treatment: Lavage of the naso-pharynx, through the anterior or posterior nares, according to the patient's tolerence, with ½ litre of a 1 per cent. sol. of phenosalyl, followed by nasal inhalation for 4 or 5 minutes of a coffee spoonful of the following solution:

Formol 5.0
Menthol 10
Gomenol 10
Chloroform 10
Eau de Cologne 100.

Each evening the pharnyx is treated with the following:

Saturated solution of resorcine.

or Menthol 0.5
Tr. Iodi 5.0
Glycerine 10.0.

The writer reports favorable results.—*Jour. Eye, Ear and Throat Diseases.*

SOME POINTS IN RHINOLOGIC TERMINOLOGY.

Doctors Kyle and Fetterolf, the collaborators of the laryngological section of *American Medicine*, point out several inaccuracies and inconsistents in the terminology of laryngological work. They suggest that *tonsillator* be used to indicate an incision *into* the tonsil, *tonsillector*, partial or complete, to denote the removal of part or all of the tonsil. Considerable confusion also attends the words *turbinal, turbinate, turbinated* (used as a noun), and turbinate or turbinated body. They suggest the following remedy: Let the word *turbinate* apply only to the bone, *epiturbinate* to the soft tissues overlaying the bone, and *panturbinate* to the entire structure. The situation of septal deviations can be more easily and accurately explained by using the term *osteseptum* as indicating the bony portion of the septum, *chondroseptum*, the cartilaginous portion, and *panseptum* when the entire septum is referred to.

CATARRHAL DEAFNESS.

Snow, *New York Medical Journal*, October 11, 1902, says that little can be done in these cases if the skin is inactive and that personal hygiene must be considered of paramount importance. Cold baths and frictions are exceedingly useful. A torpid liver frequently thwarts the best efforts to get local treatments through to the middle ear. Dyspeptic or intestinal disturbances, as well as uric acid and uterine troubles, produce an irritability of the mucous lining of the head quite sufficient to necessitate their correction before the tubes will remain normally patent. Vigorous exercise can be made a great aid in relieving the distended vessels. The author urges active arm exercise every morning as a routine. With the correction of these conditions, a correction of morbid nasal conditions makes the disease, as a rule, non-aggressive and capable of much improvement.—*America Medicine.*

HEADACHES.

Edwin Pynchon, in a reprint from *Anna's of Opthalmology and Otology*, makes the following distinction :—

When from Nasal Stenosis.	When from Eye Strain.
Generally unilateral.	Generally bi-lateral.
Frequent insomnia.	Sleeps soundly.
Often worse mornings.	Improved after sleep.
Aggravated by physical exertion, running, stooping, etc.	Aggravated by use of eyes.
Not subject to sujunctivitis.	Conjunctivitis after prolonged use of eyes.
Generally nasal catarrh.	Catarrh not complained of.
Excited by acute coryza.	Not subject to coryza.
Nose not suspected by patient.	Appetite and digestion good.
Dyspepsia and nausea.	Astigmatism usually present.
Astigmatic test negative.	Pressing mid. turb. does not increase headache.
Pressing middle turbinate with probe increases headache.	Sensitive to bright light.
No photophobia.	

RETINAL HEMORRHAGE.

Haden in *Philadelphia Medical Journal* February 21, 1903, reports two cases of retinal hemorrhage. He concludes as follows:

(1.) Retinal hemorrhage, associated with high arterial tension and accompanied by transitory albuminuria, are significant of beginning widespread arterial degeneration.

(2) In those cases of so-called physiological or transitory albuminuria occurring in active healthy young business men or students, in those who are working under forced pressure, opthalmoscopical examination should be made for retinal hemorrhages.

(3) When retinal hemorrhages occur without albuminuria the patient should be kept under observation, the urine examined from time to time and the quantity noted.

(4) In case of finding these conditions it is our duty to warn the patient of his condition, and, as Osler says, "to gain his intelligent co-operation" and preserve his life and usefulness.

Prescriptions.

Ear-Ache.

℞		Acid Carbol. liq.	grs. 5
		Cocaine Hydrochlor	
		Menthol	āā grs. 15
	M.	Alcohol	℥. 75

Sig.: To be dropped into the ear.

—*Heclit*, in *Medical Record.*

For Atrophic Rhinitis.

℞		Acid Carbol.	grs. 3
		Sodii Boratis	grs. 30
		Sodii Bicarb.	grs. 60
		Glycerine	ʒ iss
	M.	Aqua	q.s. ad. 3 oz.

Sig.: Use as a nasal douche three times daily.

Catarrhal or Simple Acute Conjunctivitis.

℞		Acid Boracici	grs. 5
		Zinci Sulph.	grs. 2
		Tinct. Opii	ʒ i
	M.	Aqua, dist.	ad ʒ i

Sig.: One drop in the eye, morning and evening, or only once a day in mild cases.

—*Swanzy.*

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

At the annual meeting of the corporation of the Montreal General Hospital, it was stated that 2,878 indoor patients were treated in that institution during 1902, while in the outdoor departments the consultations numbered 31,993. Dr. Finley, the secretary, read the financial report, which showed that the receipts had totalled $87,439 and the expenditure $99,967, an excess of expenditure over receipts of $12,428. The endowment fund has grown in the year from $37,500 to $43,500. Fifty-five more patients were treated in the wards than in 1901. Of the total number treated in the ward, 166 were in the hospital at the beginning of the year, 2,894 were admitted, and 184 remained in the hospital on Dec. 31st, 1902. There were discharged from the hospital 2,652, and there died in the hospital 266, of the latter 88 died within three days of admission. The mortality was 7-5 per cent., or 4-8, if the 88 were omitted. The average cost of patients per day was $1.49. Dr. Finley was re-elected secretary.

The following is a summary of the papers read at the Montreal Medico-Chirurgical Society during the past month.

Dr. Elder read the report of a case of hourglass contraction of the stomach. The past history was of special interest, as Dr. Elder had himself been in attendance during the acute symptoms and consequently had accurate notes of the conditions then present. Twelve years ago the patient had a gastic ulcer and vomited large quantities of blood; in fact so great was the hemmorage that her life was despaired of. However, under the usual treatment she recovered, although ever since she has had chronic grastritis, gastric lavage having been practised for nearly a year with great benefit. Some five months before admission to the Montreal General Hospital she complained of great pain in the epigastrium, especially after eating. This was accompanied by a swelling at the left side of the abdomen, close to the ribs and under the left rectus muscle, which appeared after meals, but invariably vanished by the next morning when the stomach was empty. Dilatation of the stomach showed an oval swelling under the left rectus muscle, extending downwards almost to the umbilicus. A diagnosis of hourglass contraction of the stomach was made and operation decided upon. The diagnosis

was confirmed on withdrawal of the stomach from the abdomen, for the cicatricial tissue from the old ulcer had gathered up the stomach wall into a ring, which was situated towards the cardiac end, so that the pyloric end of the hourglass was considerably larger than the cardiac end. The lumen of the ring connecting the two pouches was so small that it only admitted the tip of the little finger. A gastro-plastic operation was performed—precisely the same as a Heineke-Mikulicz operation on the pyloris—and proved quite successful in restoring the stomach to its normal shape. Subsequent treatment was that usually followed out in stomach cases, nutrient enemata for three days and then fluids gradually by mouth. The patient was discharged three weeks after operation and now, three months later, is in perfect health, with marked increase in weight and physical strength. In speaking of the methods of operation, Dr. Elder mentioned another case in which he had adopted a similar procedure with equal success, and as far as he could judge it appeared to be the operation of choice.

Dr. Finley brought before the society reports of two cases illustrating some complications of mitral stenosis. The first was an old woman æt. 71, who gave a history of acute rheumatism at the age of 21, but had otherwise been in perfect health until the present illness, when sudden pain in the ankle, followed by severe pain in the leg and thigh, prevented her from going to work. On examination the leg was found to be red, swollen, and tender even high up in the thigh, and no pulsation could be found in the posterior tibial artery, although it was easily felt in the other leg. The heart showed well marked enlargement, as well as a thrill with presystolic murmur. The second was a woman æt. 39, with a history of rheumatism fifteen years ago. She had no symptoms of cardiac disease until she was seized with a sudden sharp pain in the side, followed by hæmoptysis and severe dyspnœa. Examination of the chest revealed a systolic and presystolic murmur, with a thrill at the apex, also a soft diastolic murmur down the left side of the sternum, while later dullness was found at the base of the lung with a distinct friction sound, and shortly afterwards a quantity of fluid was withdrawn. The patient has suffered with extreme dyspnœa since the sudden onset of the embolism in the lung, notwithstanding the administration of the usual remedies.

A paper of some surgical importance, and great pathological interest, was read by Dr. Adami on Exogenous Ulceration of the Intestines. Dr. Adami has been unable to find a name for the type of ulcer which originated on the external, or peritoneal surface of the intestine, in any text book, and consequently has been compelled to invent one which he

thought was at the same time adequate and accurate. The usual way for ulceration and perforation of the intestines to take place was from the mucous coat out to the serous coat, namely, endogenous ulceration, whereas the ulceration from serosa to mucosa might be termed exogenous ulceration. A very pretty example of the latter type was demonstrated. There was a distinct and complete perforation of the serous and muscular coats but the mucosa was riddled with holes and formed a sort of net work over the perforation on the inner side, evidently showing that the process had commenced in the serous coat.

In examining 700 consecutive post-mortem reports at the Royal Victoria Hospital it was found that in all 9 per cent. were endogenous perforations of the intestines, including some 15 cases of perforation in typhoid fever; further, 2.8 per cent. were of such a nature that the variety could not be determined, and rather remarkably 2.28 per cent. were described as exogenous. This is a surprisingly high percentage and it will be interesting to find whether another series of records will furnish a like result.

Drs. W. F. Hamilton and R. Byers reported two cases of relative aortic incompetency. In the first the physical signs and symptoms of aortic regurgitation were typical, and the pathological specimen which was presented showed sclerosis and enlargment of the aortic ring, while the cusps of the valve were quite normal in size, shape and texture, but the increase in the size of the aortic ring made the valves remain too far apart to completely close the orifice. The second was probably due to dilatation, as the walls of the heart were very flabby.

Dr. Shirres showed a specimen of cerebellar tumour. The interesting feature in the history was that no cerebellar ataxia developed, and at post-mortem examination it was found that the lesion was symmetrical, each lobe of the cerebellum being involved by a tumour, probably of a tuberculous nature. Dr. Shirres also read a paper on eleven cases of amaurotic family idiocy. These cases as usual were Hebrews and were in every way typical. The general picture was that of spastic diplegia, namely: increased reflexes, normal sensation, normal reaction of muscles to the Faradic battery, but in addition very sensitive hearing, a loud noise sending the muscles into tetanic contraction, further there was the dilated pupil, optic atrophy and changes in the macula lutea diagnostic of the condition. The brain post-mortem showed no marked irregularity, cystic formation or porencephaly, but the post central convolution was markedly atrophied and the cells were very few in number and the consequent degeneration was found down the motor tract.

Dr. Matthewson reported a case of aphonia due to a foreign body in the external auditory meatus. The patient was a young man who complained of great hoarseness and some deafness. The ears were examined and found to be plugged with cerumen, and on washing them out the sharp end of a carpenter's lead pencil was removed. Complete return of the voice followed at once. An explanation was rather difficult, but the condition might have been caused by reflex irritation through Jacobson's nerve. In the discussion which followed Dr. Shepherd said that he failed to see how Jacobson's nerve could be affected. Dr. Birkett suggested that the condition had been functional.

Drs. Mills and Gordon gave a short communication with demonstration of the reflexes after complete transverse section of the spinal cord in the dog. Several experiments had been made with dogs and in every case complete section of the cord produced increased reflexes below the lesion, superficial and deep. In man reports were somewhat conflicting, but the majority of authorities state that complete section of the cord produces flaccid paralysis. The paper was illustrated by a dog whose cord had been cut about two weeks before. The reflexes below the lesion were masterly increased and the dog showed the well-known but rather inexplicable phenomenon of " pendulum motion " of the hind legs, when held up in the air. A very interesting and animated discussion followed the reading of this paper, in which Dr. Shirres stated that he had never seen a complete transverse lesion of the spinal cord in man, in which the reflexes were increased. One case he remembered in which the cord appeared to be completely reduced to a pulp, he had been able to trace uninjured fibers connecting the sound portions of the cord and he thought that if careful examinations were made in such doubtful cases, that some of the fibers would be discovered which were uninjured. He also mentioned a case in which the spinal cord had been destroyed for the distance of about two inches. The reflexes were absent, and when, a year and a half after the accident, the patient was again operated upon and the ends of the spinal cord freshened, electrical stimulation of the anterior horns produced a contraction of the muscles, and stimulation of the posterior roots also gave a contraction, showing that reflex are still intact.

MEDICAL SOCIETIES.

TORONTO MEDICAL SOCIETY.

STATED MEETING JANUARY 22ND, 1903.

The meeting was held at the Victoria Hospital for Sick Children.

Dr. Peters showed (1) a case, age 4 years, with an enormous mass which had appeared three months ago and continued to grow. It was poulticed and lanced with only clear blood being obtained. It was then poulticed and hemorrhage occurred, which was stopped with flour. It subtends the tuberischii, is attached to the bone, and is immovable, has fairly large veins over it, without fluctuation, is hard, seemed to be defined in limit. With a finger in the rectum, it was possible to get above the growth and the mucous membrane was smooth. There had been no blood in the stools till of late, and he was afraid that it had fungated into the rectum. It was probably a round celled sarcome. The case was very grave, the only treatment was an inguinal colotomy and then the removal of the tuberischii, perineum, and rectum. He thought the case was inoperable.

(2) A case of hare-lip and cleft palate, Brophy of Chicago did the palate first by crowding in of the parts with a lead plate on each side and silver wire across.

(3)Multiple osteoma, slow in growth, unusual in the number of growths, exostoses from the epiphyseal cartilage (hyalin). The ulna of the left arm terminates much higher than the radius. The growths are due to aberrant pieces of cartillage which continue to grow, and the epiphysis grown away from them, leaving them behind. They are said to be innocent, but he knew of one case where they became sarcomatous. The Tibia and Fibula have grown on the right side an inch and a half more than on the left.

Dr. Carveth asked the results of removal of sarcoma in children. Dr. Fletcher asked what the x-ray results were in such cases. Reply: Prognosis was very bad unless got early. The x-ray was admitted useless in all forms but the spindle celled, and then only 30 per cent. were cured. The same was true of Colles' fluid.

Dr. Primrose showed, 1st, a calculus removed by suprapubic cystotomy. 2nd. A case of empyaema—an unresolved pneumonia had extended over seven weeks. A fluctuating tumor, pointed internal to the nipple line, and at the level of the third rib. Opened in the mid axillary

line. A portion of the sixth rib was removed, drainage employed. There was some spinal curvature. 3rd. A case of lateral curvature of the spine, first noticed 43 days ago, but probably there before. The inequality of the length of the lower extremities was very exaggerated, also the prominence of the left hip and right shoulder. Anterior poliomvelitis existed, previous to the deformity.

Dr. Powell said the treatment was briefly a course in gymnastics, with massage, electricity, and plaster jacket.

Dr. Powell then showed, 1st, a case of lateral curvature in an earlier stage than that of Dr. Primrose's case. 2nd. One a little later developed. 3rd. Illustrating the value of the x-ray, a case of slate pencil removed from the cuneiform bone in the foot.

Dr. Thistle showed a case of cretonism aged 20 years. 40 inches in height, now changing his milk teeth, has lipomatous pads on the clavicles, has been getting 15 gr. thyroids and will increase to 20 t. i. d.

Dr. H. B. Anderson showed a case, sent in as Cretin, but is a mongolian idiot, 5 years old, eyes oblique, no pads of fat, temperature always normal. Dr. Rudolf said that he did not think it a case of mongolinism as there was no usual shortness of the little finger, nor curve outward to the hand.

TORONTO MEDICAL SOCIETY.

MEETING FEBRUARY 5th, 1903.

The President Dr. Hay, in the chair.

Dr. J. F. W. Ross read a paper "General Purulent Peritonitis, its Treatment and Result." He gave as definition cases in which there is pus all over the peritoneum, and reported 45 cases with 28 deaths. In the first 500 cases of abdominal section, 14 cases, with 12 deaths and 2 recoveries. In the second 500, 22, with 15 deaths and 7 recoveries. In the third 500, 9, with 1 death and 8 recoveries. He gave the histories of a number of these cases. He used Dr. Lawson Tait's ovariotomy canula to reach all parts of peritoneum in washing out, with normal saline solution. He then closes the abdomen. In washing out he is careful to reach the post splenic, post hepatic, two lumber pouches of the peritoneum, and the pelvic pouch, called Douglas' cul de sac, using gallons of saline solution. The chief points he made were 1st, get cases early and then don't wait till the abdomen begins to distend; 2nd, use normal saline solution instead of plain water, and use plenty of it; 3rd, don't drain—no outside poison can then be introduced, and draining is unnecessary if the washing out is thorough. Dr. Ferguson said that

he wished to emphasize that the washing must be thorough, and that some of the solution be left in the abdomen. An instrument should be used to reach the remote parts of the peritoneal cavity. He agreed in not draining. Dr. Hunter related a case of general peritonitis that he had operated on years ago; found pus everywhere and had washed well out, with recovery. Dr. Beatty asked which was the best site to open the abdomen in general peritonitis—in the middle line or over the appendix? Dr. Rudol asked how much morphia Dr. Ross allowed his cases? In reply Dr. Ross said, if in doubt as to the appendix being the cause, open in the middle line. Morphia should be used till respirations fall to 12. It is an antidote to the poison. Give one-quarter grain every two hours or so till respiration is lowered.

Dr. W. J. Wilson then read a paper on "Treatment of Disease With and Without Medicine." He said that in prescribing we ought always to take into consideration associated conditions of diet, food surroundings, etc. In pulmonary tuberculosis he feared that to-day there was too great a tendency to treat many cases with fresh air alone, although for years drugs had been employed with success. Sanatoria are largely responsible for the fresh air fad. Fæcal absorption may neutralize the benefit of the fresh air. In all cases we should watch the patient's diet, exercise and excretions. Attention to these will cure in some cases without medicines. Massage is good in some cases. Suggestion may be good, but is more adapted to quacks and faith healers. The physician's manner was important, as he should inspire confidence. Diet was very important in many diseases. Know the food values and food preparations. Habits, as alcohol, tobacco, oversexual excitement, business worry, must be considered. Correct faulty habits and then medicine would have a chance. The stock drug preparations on the market are harmful to the physician. Pills, tablets, etc., may be old and insoluable. There is an art in administering drugs to get the best effect, and this will be lost to a man who prescribes by number, and does not consider habits, environment, etc. The man who lays his trust in fresh air and ignores drugs, is usually one-sided. Discussion: Dr. Ferguson said a good remedy must be used intelligently. He thought that there was a tendency by good men to ignore drugs. What was good for one patient was not for another. One might require a small dose, another a large one. Dr. Hunter said it was a mistake to repeat the same prescription. A man could get suggestions from the prescriptions of his colleagues.

Dr. Hunter moved that this Society place itself on record as deeply regretting the death of the late Judge McDougal. He was well known

to this Society. His kindly face and courteous manner will never be forgotten. His life was a great inspiration. This was seconded and carried by a standing vote.

A clinical meeting was held at St. Michael's Hospital, Feb. 19th, 1903. The President Dr. Hay, was in the chair. Drs. Jennie Gray, Lelia Davis, Ashby and Chamberlain were elected members. Drs. J. McMaster and J. D. Webster were nominated for membership.

Dr. McKenna presented a case of septic arthritis. The right knee was swollen, was aspirated and the culture found to be pneumococcus. The left followed There was a slight rigor, with a temperature of 106. Twenty-five incisions were made. There was no history of pneumonia. The right knee was slightly ankylosed. Dr. Chambers said that he had seen the case several times, and thought the result good. There had been no sign of pneumonia. Dr Uren said that, considering the length of time draining and the washing, the result was very good. Dr. Hunter said he would ask at what stage do we get rigors in these cases? Is the germ systemic or still local? Dr. Ferguson said, to Dr. Hunter's question, that the germs may be localized when the chill occurs, as the rigor is due to the toxines. Dr. T. S. Webster said the irrigation should be almost continuous, once every hour at least. He related a case where he had used 1-4000 hydrogen bichloride, without any harm to the serous coverings.

Dr. Chambers showed a case of ringworm. A small spore was formed on the scalp and body. The case very closely resembled psoriasis. The treatment was old, namely, a fly blister, then allow a crust to form, remove the crust and repeat the treatment. Dr. Wilson said that it was too bad that we were not further advanced in the treatment after all our research on germs.

Dr. Oldright exhibited a case of gun shot wound in the lower end of the femur, coming out at the lower level of the knee joint. There had been suppuration, and now choreic movements were produced by touching the lower scar. Dr. Primrose said that there had been destruction of the knee joint. There was some dislocation of the tibia backward and that, in trying to straighten the joint, injury to the Popliteal nerve was a danger.

Dr. Chambers showed a case of rodent ulcer. The disease began at the bridge of the nose. The case had been four months under treatment by x-rays and violet rays, three times a week, 5-10 minutes each time, at 6 inches distance. Dr. McMaster said that this case required the removal of the orbit. It was useless for vision, and prevented the healing process. He said that one cause of failure in these cases was the

virus of syphilis. Small ulcers get better proportionately faster than larger ones. Dr. Ferguson said that the x-ray did its work in the same manner as chemical agents. Like arsenic paste, it destroyed even healthy tissue, but first the diseased.

Dr. Chambers showed for Dr. Norman Allen, a case of gastric tumor with pyloric obstruction. There was an absence of HCl acid. The Openboas bacillus was present. He asked the opinion of those present as to gastro-enterostomy. Dr. T. S. Webster drew attention to the enlarged superficial veins and asked if there was lactic acid in the stomach. Dr. Dwyer said that he thought the exploratory incision should be made. The patient had not the usual cachexia.

Dr. Primrose showed a specimen of pedunculated middle lobe of the prostate. It had been removed by the suprapubic method.

Dr. Oldright exhibited to the Society a case of epithelioma of the submaxillary gland. The case was seen by the fellows a year ago with a cancer on the lower lip which he had had removed at that time.

Dr. Dwyer showed a case of Pneumothorax. No history could be obtained of the case. There was Hemiplagia with aphasia. The temperature and pulse were normal, the breathing was rapid, there was a little cyanosis. Thirty ounces of pus had been removed by aspiration. No organism was found in the pus. The left pleural cavity extends to the right of the sternum. Dr. Ferguson said that the hemiplegia and aphasia might be due to embolism, even though there are no murmurs in the heart. Valvular disease may exist and cause emboli, and no murmurs present. We can have murmurs and nothing pathological in the valves. Murmurs were due to eddies in the blood stream producing vibrations. Dr. Primrose said in regard to treatment it seemed to be a case of pure tubercular infection, and that great care was therefore necessary not to get a mixed infection. Watch for the collection of fluid and a rise in temperature. Should such occur, then open at once, drain, and obliterate the cavity. Dr. Oldright said that the syphon method was a much safer way than the open one. The chest then could be washed out and the fluid syphoned off.

Dr. Primrose exhibited a case of tubercular hip. The abscess was opened, recurred, opened again. On cutting down on the hip joint, he found the joint disintegrated, and removed the head of the femur and part of the great trochanter.

CANADIAN MEDICAL ASSOCIATION.

The thirty-sixth annual meeting of the Canadian Medical Association will be held in the City of London, Ontario, on the 25th, 26th,

27th and possibly the 28th of August, under the Presidency of Dr. Walter H. Moorhouse of this city. Dr. James Stewart, of Montreal, will deliver the Address in Medicine, Dr. Matthew D. Mann, of Buffalo, has been asked to deliver the Address in Gynecology, and Dr. Alexander Hugh Ferguson, of Chicago, the Address in Surgery. Recently the president appointed Dr. R. W. Powell, Dr. T. G. Roddick, M.P., and Dr. E. P. Lachapelle, a special committee in regard to the establishment of a proposed Dominion Health Bureau. This committee recently waited on Sir Wilfred Laurier at Ottawa, with the result that the premier has promised the proposal consideration. Dr. Moorhouse has also delegated Dr. C. F. Martin, Montreal, to the International Medical Congress at Madrid. Already arrangements are well in hand for a splendid meeting at London. Further announcements will appear in the CANADA LANCET from month to month.

The various committees formed were the following:

The executive was appointed in Montreal last Fall, viz:—W. H. Moorehouse, Pres.; Hadley Williams, Sec.; Drs. Eccles, Wishart and Moore, to which has been added Dr. J. Piper Smith, and Dr. Niven.

I. *Reception*—Chairman, Niven; Roome, Waugh, McArthur, Hutchinson, Hogg, McCollom, E. Williams, Cowen, Woodward.

II. *Programme*—Chairman, Hodge, Angus Graham, H. McCallum, Butler, Meek, Kingsmill, Wishart, J. Piper.

III. *Entertainment*—Chairman, J. D. Wilson, Becher, D. H. Piper, McLaren, Ovens, Belton, Bayley, Macklin, Henderson, Burdon, Reason, J. Wilson.

IV. *Transportation*—Chairman, Drake, English, Shett, G. Wilson, Pingle, Shaw.

Pathologic—Chairman, New, W. G. Compbell, W. Stevenson, D. Arnott, Leaborn, Ferguson, Jento, Cooper, D. B. Fraser (Stratford).

Exhibition—Chairman, Teasdall, Tillmann, Thompson, Clive, H. Stevenson, Balfour, Weekes, Clarke, Alexander.

Finance—Chairman, Eccles, Niven, J. D. Wilson, Hodge, Drake, New, Teasdall.

GEORGE ELLIOTT, General Secretary,
129 John Street, Toronto.

THE AMERICAN CONGRESS ON TUBERCULOSIS.

The next meeting will be held in St. Louis, Mo., U.S.A., July 18th to 23rd, inclusive, 1904. The work of organization is being pushed as rapidly as possible. To facilitate this, the Congress has been granted a

charter, thus making it a legal body and by this means greatly facilitating the work of reorganization on the lines mapped out at the last meeting, when it was decided that a radical re-organization should be completed by the officers elected.

THE AMERICAN UROLOGICAL ASSOCIATION.

The above Association meets this year in New Orleans on 8th and 9th May, the last day and the day following the meeting of the American Medical Association.

THE ONTARIO MEDICAL ASSOCIATION.

This Association meets this year in Toronto on 16th, 17th and 18th June. Dr. T. S. Cullen of Johns' Hopkins will give a paper on some surgical subject, and Dr. J. H. Musser, of Philadelphia, will give one on some medical subject. The main feature of the Association will be an exhaustive discussion on Arterio-Sclerosis by various members. There will be a smoker in St. George's Hall on the evening of the first day, and a dinner on the second day. It is hoped there will be a very large attendance. Dr. J. C. Mitchell, of Toronto, is president, and Dr. H. C. Parsons, 12 Bloor St. W., Toronto, secretary.

UNIVERSITIES AND COLLEGES.

LAVAL UNIVERSITY MEDICAL FACULTY.

The College of Medicine and Surgery of Montreal was founded in 1843. It was incorporated in 1845. After having been, from 1867-1891, the Faculty of Medicine of Victoria University, Cobourg, it became, in 1891, the Faculty of Medicine of Laval University, Montreal. It is now in its 60th session.

In connection with the College there is a staff of 50 professors, associates, fellows, and pathologists.

The students of the College obtain the clinical experience at the Hotel Dieu Hospital, 250 beds, which medically is entirely under the control of the professors of the College; at the Notre-Dame Hospital, 150 beds; at the Montreal Maternity Hospital; and at a number of dispensaries. Diseases of the mind are studied at the Asylum St. John de Dieu. There are at present about 225 students in attendance.

The fees are: Registration, $2; for lectures, $80; Maternity Hospital, $8; Hotel Dieu and Notre-Dame Hospitals for 12 months, $8: part for dissection, $4. These fees are paid annually for four years.

A number of externe appointments are open to the students at Notre-Dame Hospital. The students have access to the library, containing a large collection of medical works, mainly in the French language.

When presenting themselves for their examinations, students mus furnish evidence that they have successfully submitted themselves to the preliminary examinations.

No medals or prizes are awarded, but successful students are ranked as having passed, passed with distinction, or passed with great distinction

The professional course of studies consists of four years, and a nine months' session in each year. By years the course is as follows: First year, Histology; bacteriology; descriptive and practical anatomy; hygiene; general physiology; natural chemistry; and practical toxicology.

Second year. Histology; bacteriology; descriptive and practical anatomy; general physiology; medical chemistry; practical toxicology; hygiene, and medical and surgical clinics.

Third year. Medicine; surgery; legal medicine; diseases of the mind; materia medica and therapeutics; practical pharmacy; obstet-

rics; operative surgery; pathological anatomy; bacteriology; medical, surgical and obstetrical clinics; eye, ear, nose and throat; pediatrics; gynaecology; medical ethics; the history of medicine; and practical medical electricity.

Fourth year. Medicine; surgery; materia medica and therapeutics; practical pharmacy; obstetrics; operative surgery; pathological anatomy; bacteriology; medical, surgical, and obstetrical clinics; eye, ear, nose, and throat; medical laws and ethics; history of medicine; and medical and practical electricity.

The requirements for the primary examinations, in lectures are: descriptive anatomy, 120 lectures a year for two years; practical anatomy, 90 lectures yearly of two hours duration for two years; normal and pathological histology, 60 lectures a year for two years; physiology and medical electricity, 120 lectures a year for two years; hygiene, 30 lectures a year for two years; surgical and medical clinics at the Notre Dame Dispensary; general pathology, 60 lectures a year for two years.

The tickets required for the final examinations are: materia medica and therapeutics and practical pharmacy, 120 lectures a year for two years; surgery and operative surgery, 120 lectures a year for two years; medicine, 120 lectures a year for two years; obstetrics and the diseases of infancy, 120 lectures a year for two years; legal medicine and insanity, 60 lectures a year for two years; surgical clinics and medical clinics, three terms of eight months each; eye, ear, nose, and throat, 60 lectures a year for two years; obstetrical clinics, 48 lectures for one year; gynaecology, one course of 60 lectures; pediatrics, two courses of 30 lectures each; medical ethics and historical medicine, 10 lectures a year; pathological anatomy and bacteriology 60 lectures yearly for two years; practical medical electricity, 10 lectures yearly for two years.

The examinations on the primary subjects are held at the end of the second year, and those on the final subjects at the end of the fourth year. The student of the fourth year must have passed the previous examinations, before being admitted to the final. The examinations are written and oral. The student must pass on the written before he is admitted to the oral.

Those who have passed the primary examination have the right to the title Bachelor in Medicine; on passing the final, to the title Doctor in Medicine.

McGILL UNIVERSITY MEDICAL FACULTY.

The Medical Department of McGill University is now in its seventy-first session. There is a teaching staff of over seventy professors, lecturers, fellows, and demonstrators. And the students in attendance number 455.

The fees for the various subjects are as follows: The matriculation examination, $5; if taken as a local examination, $4 extra; for taking it in parts, first part, $5; subsequent examination, $2; examination of certificates exempting students from the matriculation, $1; registration of University School standing, $5; the sessional fees, $125 a year, for four years; hospital fees, $10 yearly, for three years, this covers Royal Victoria and Montreal General; University fee of $3 for care of grounds and athletics; for students repeating any session, $35; admission ad eundem gradum, $10; annual fee for each hospital, $5; Montreal Maternity, $12; diploma in Public Health, $20; diploma in Legal Medicine, $20: for the M.D., C.M., $30 paid by successful candidates when results are known. Fee for supplemental examination on undergraduate subject, $5. For special courses in ophthalmology, dermatology, genito-urinary surgery, orthopœdics, gynæcology, diseases of children, $50.

The following medals, fellowships, and prizes are awarded to the successful candidates:

The Holmes gold medal is awarded to the student of the graduating class who receives the highest aggregate number of marks in the different branches comprised in the medical curriculum.

The Sutherland gold medal is awarded for the best examination, in general and medical chemistry, together with creditable examination in the primary branches, and is held at the end of the third year.

The final prize consists of books, or a microscope, and is awarded for the best examination, written and oral, in the final branches.

The third year prize is one of books and is for the best written and oral examination in third year subjects.

The second year prize is also one of books, and is for the best examination in the second year subjects.

The first year prize is in the form of books for the best candidate in first year subjects.

The Clemesha prize in clinical therapeutics is awarded for the highest marks at a special clinical examination.

Clinical instructions are given in the Royal Victoria of about 300 beds; and in the Montreal General Hospital, with about 250 beds. In this latter hospital there were treated last year from 2,000 to 3,000 patients. Clinics on insanity are given at the Verdun Hospital for the

insane. Special clinics on dermatology, larynyology, infectious diseases, genito-urinary diseases, gynæcology, are given at the Montreal General and the Royal Victoria Hospitals.

To obtain the degrees M.D., C.M., the following regulations must be observed with regard to matriculation and professional studies and examinations :—

Every student before he can be enregistered as an undergraduate in medicine must present a certificate of having passed the matriculation examination of the faculty of medicine or arts of this university, or of having passed some State or university examination accepted by this university.

Graduates in arts of any recognized university and those who have passed the entrance examination of a Provincial Medical Council and thus become enregistered students in medicine of a province in Canada are exempt from further preliminary examination.

Students from the United States who have passed a State or university examination fully equivalent to that required by this university may at the discretion of the faculty be admitted to the study without further examination.

Students who fail in not more than one subject other than Latin may enter the first year ; but the matriculation must be completed before the commencement of the second session. Those who fail on one or more subjects in June, or who have taken part only of the examination, may present themselves in September, and will be re-examined on all subjects, except those on which they make 50 per cent.

The subject embraced in the matriculation examination are :—Dictation, grammar, British history, composition, literature, arithmetic, euclid, BI, II., III., algebra to end of quadratics ; Latin, grammar, texts, and translation at sight ; and one of either chemistry, French, German, Greek, or physics.

The following are accepted *pro tanto* in lieu of the above :—The entrance or matriculation examination of the various medical boards of Canada ; the university school examinations ; the first year entrance exhibition examinations ; the model school diploma examinations of the McGill Normal School ; the matriculation or leaving examinations accepted by the universities of Ontario ; the leaving examinations of Nova Scotia ; the matriculation examination of Dalhousie University ; and the leaving examination of Prince of Wales College, P.E.I.

The professional course for the degrees of M.D., C.M., consists of four nine months' sessions in the University or some other college, university or school approved of. Students presenting certificates from the Univer-

sities will be required to pass all the examinations on the primary and final subjects. Graduates in Arts who have taken two full courses in General and Practical Chemistry, two courses in Biology, including Botany, Embryology, and Physiology, and the dissection of one or more vertebrata, may be admitted as second year students, but they must take Anatomy for two years.

Candidates for the final examination must show that they have taken two full courses on Anatomy, Practical Anatomy, Physiology, Chemistry, Pharmacology and Therapeutics, Principles and Practice of Surgery, Obstetrics and Diseases of Infants, Gynæcology, Theory and Practice of Medicine, Clinical Medicine, Clinical Surgery; one full course on Medical Jurisprudence, General Pathology, Hygiene and Public Health, Practical Chemistry; one course on Ophthalmology and Otolgy, Biology, Histology, Pathological Anatomy, Bacteriology, Mental Diseases, Pediatrics, Medical and Surgical Anatomy. They must furnish certificates for six autopsies, three months' dispensing, and assisting at twenty vaccinations.

Courses of less than the above will be accepted for the time which they cover. No one can become a candidate for the degrees, unless he has attended one full session at the University. Candidates for the degrees must have attended for 22 months the Montreal General, the Royal Victoria Hospitals, or some approved hospital of not less than 100 beds. They must have acted as clinical clerk for six months in medicine and six months in surgery, and reported at least 10 medical, and 10 surgical cases. They must give proof of nine months experience at the Montreal Maternity Hospital, or other approved lying-in-hospital; and assisting at six labors.

The subjects of the first year examination are: Biology, Histology, Physiology, Anatomy, Chemistry, Practical Chemistry, Elementary Bacteriology.

For the second year the subjects are: Anatomy, Chemistry, Practical Chemistry, Physiology, Practical Physiology, Pharmacology, and Histology.

The third year subjects are: Pharmacology and Therapeutics, Medical Jurisprudence, Public Health and Preventive Medicine (including Bacteriology), General Pathology, Mental Diseases, Clinical Chemistry, Clinical Microscopy, Obstetrics, Medicine and Surgery.

The fourth year examinations are: Medicine, Surgery, Obstetrics, Gynæcology, Ophthalmology, Clinical Medicine, Clinical Surgery, Clinical Obstetrics, Clinical Gynæcology, Clinical Ophthalmology and Practical Pathology.

By means of the above arrangement a certain definite amount of work

must be accomplished by the student in each year, and an equitable division is made between the primary and final branches.

A minimum of 50 per cent. in each subject is required to pass and 75 per cent. for honors.

Special courses have been arranged to enable students to take their B.A., M.D. or B. Sc., M.D. in six years. And also two special courses for a Diploma in Public Health and Legal Medicine.

UNIVERSITY OF BISHOP'S COLLEGE MEDICAL FACULTY, MONTREAL.

The medical faculty of the University of Bishop's College is now in its thirty-second session. The Unversity is located at Lennoxville, while the Medical College is in Montreal. It has a teaching staff of about 40 professors, lecturers instructors and demonstrators. There are in attendance upon lectures about 60 students.

The following fees are imposed : The total fees for whole medical faculty course of four sessions are $400, in four annual payments of $100, which includes laboratory work, dissecting material, and chemical reagents ; partial students pay special fees ; for the degrees of M. D., C. M., $30, one-half returned if the candidate fails ; Montreal General Hospital : annual, $5 ; perpetual, $15 ; clinical lectures on surgery, two courses, each, $12 ; clinical lectures on medicine, two courses, each $12 ; Royal Victoria Hospital : twelve months, $5 ; perpetual, $15 ; Hotel Dieu Hospital : twelve months, $4 ; clinical lectures on surgery, two courses, each $8 ; clinical lectures on medicine, to courses, each $8 ; Notre Dame Hospital, six months, $4 ; Western Hospital : one year, $5 ; perpetual, $15 ; Montreal Dispensary : six months, $3 ; full course in dispensing, $8 ; Women's Hospital, one year, $10 :

The following medals, prizes and scholarships are offered : The Wood gold medal, value $60, is awarded to the students who has taken the highest standing in the primary and final subjects.

The Robert Nelson gold medal, value $50, is given for the best special examination in surgery, open to those who take honors in the aggregate on the final branches,

The David silver medal is awarded to the student who obtains the highest number of marks on the primary examinations.

The Chancellors prize in books is given to the student who passes the best final examination, other than the Wood gold medalist.

The above medals and prizes are only awarded to those who have attended at least two sessions in Bishop's College.

Prizes in books are given for the best examination on histology, and the best dissecting and practical anatomy of the first and second years. A scholarship, consisting of a reduction of one-half the fees in all the theoretical subjects of the college, is given to the student obtaining the highest aggregate marks at the Provincial examinations each year.

A scholarship of a reduction of one-half the fees in the theoretical subjects is awarded to a graduate in arts from Lennoxville who shows the highest aggregate marks in the arts course.

No students shall receive a medal or prize who does not take honors.

Clinical experience and teaching are obtained in the wards of the Western Hospital, the Women's Hospital, the Montreal General, and the Royal Victoria Hospitals, the Hotel Dieu Hospital, and the Montreal Dispensary. These hospitals have a capacity of about 1,000 beds. Special courses are given at these hospitals on gynaecology, physical diagnosis, nervous diseases, orthopaedic surgery, microscopy and chemistry, skin diseases, and on eye, ear, nose and throat.

The University matriculation consists of the following subjects, and the examination is held in October and March.

(*a*) English language, including Grammar and Composition.

(*b*) Latin, including Grammar, Translation from Cæsar de Bello Gallico, Books I. and II., or Virgil's Æneid Book I., and translation of easy passages not taken from such authors.

(*c*) Mathematics, comprising (*a*) Arithmetic; (*b*) Algebra, as far as Simple Equations, inclusive; (*c*) Geometry, the subject matter of Euclid, Books I., II. and III., with easy deductions.

(*d*) Botany as in Gray's School and Field Book of Botany.

(*e*) One of the following Optional Subjects:—(1) Greek, (2) French, (3) German (4) Italian, (5) any other Modern Language, (6) Logic, (7) Physics.

The course leading to the degrees of M.D., C.M., extends over four years, and consists of four sessions of nine months each.

An annus medicus, or medical session, is constituted by at least two full courses of 120 lectures each, or by one such course, and two courses of 60 lectures each, with previous enregistration.

Candidates for graduation in Medicine and Surgery must give sufficient evidence by certificate:—

1. Of having matriculated or possessing equivalent qualifications.

2. That they have attended two six months courses of lectures in each of the following departments in Medical Science:—General or

Descriptive Anatomy, Principles and Practice of Medicine and Neurology, Surgery, Obstetrics, Chemistry, Physiology, Pharmacology and Therapeutics.

3. That they have attended one winter and one summer course in General Pathology and Bacteriology; two three months' courses in Gynæcology; one three months' course in Medical Jurisprudence and Toxicology, Diseases of Children, Hygiene, Practical Chemistry, Ophthalmology and Otology, Laryngology, also a course of not less than twenty-five demonstrations in Practical Histology. Courses in Psychiatry and Medical History, Ethics and Dermatology.

4. That they have attended two six months' courses of lectures on Clinical Medicine and Clinical Surgery.

5. That they have attended two six months' courses of Practical Anatomy.

6. That they have taken two courses of Clinical Obstetrics of twenty-four lessons each or one of forty-two.

7. That they have attended at least twenty-four months or four periods of six months each, the Medical and Surgical practice of a hospital in which are contained not less than 100 beds, under the charge of not less than two physicians or surgeons, and that they have been engaged for at least six months in compounding medicines at a hospital dispensary, or with a duly licensed practitioner.

8. That they have attended at least twelve cases of Midwifery, either in a lying-in hospital, or in a private practice, under the supervision of a regular medical practitioner.

9. They shall furnish evidence of having reported at least six medical and six surgical cases.

TRINITY MEDICAL COLLEGE.

There is on foot a movement towards the formation of an endowment fund for Trinity Medical College. Messrs. Frederic Nicholes, William McKenzie and Col. H. M. Pellatt are taking considerable interest in this matter. Already about $75,000 have been guaranteed, while the total amount aimed at is $125,000 It is understood that there will be no serious difficulty in realizing the above amount. It is also more than likely that when the endowment fund is completed, Trinity Medical College will become the Medical Faculty of Trinity University. An option has been secured on additional land adjoining the present site of Trinity Medical College.

UNIVERSITY OF TORONTO CONVOCATION HALL FUND.

Since the last public announcement of subscriptions received for the University of Toronto Convocation Hall fund, the following additional donations have been added to the already long list: The estate of the late Hart A. Massey, $5,000; Mr. and Mrs. Goldwin Smith, $2,000; Frederic Nicholl, $500; Col. H. M. Pellatt, $500; W. T. White, $250; H. C. Hammond, $250; E. R. Wood, $250; Geo. N. Morang, $100; E. W. Cox, $100; F. W. Baillie, $100; E. B. Edwards, K.C., $50; J. F. Junkin, $50; E. D. Fraser, $50; A. P. Choat, $50; Geo. A. Case, $50; R. S. Waldie, $50; H. Burnham, $25; William T. Harrison, $25; C. S. Macdonald, $25; H. R. Tudhope, $25; R. B. Thomson, $25; J. Lorne McDougall, $20; —. Breckinridge, $25; R. N. LeSoeur, $10; Duncan Walker, $10. The students have undertaken to raise $6,000. The amount to date is $33,000. The total sum required is $50,000.

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EDITORIAL.

TORONTO'S GRAND OLD MEDICAL MEN.

Dr. J. H. Richardson was born at Presqu' Isle in 1823. He began his medical studies in 1841, under Dr. Rolph, at Rochester. He then attended the first course of lectures given by the medical faculty of King's College, Toronto. He went to England in 1844 and studied at Guy's Hospital for three years. In 1847 he obtained the diploma of M. R. C. S. Eng., being the first Canadian to win this honor. He returned to Toronto and commenced practice in 1848, when he took his M. B. at King's College. At that time Dr. Sullivan was professor of Anatomy in the recently constituted medical department of the University of Toronto. Dr Richardson was appointed in 1850 to the chair of anatomy to succeed Dr. Sullivan. After the medical faculty of the University of Toronto was discontinued in 1853, he accepted the chair in anatomy in the Toronto School of Medicine, a position which he held until 1887, when the medical faculty of the University of Toronto was again restored. He was appointed professor of anatomy in the new faculty, a position which he resigned a year ago. Dr. Richardson has always been fond of out door sports, such as yachting, curling, bowling, fishing etc. Formerly he took much interest in the volunteer force, and was surgeon of the Field Artillery, the 10th Royal Regiment, and the Merchant's Company. He is an ex-president of the Ontario Medical Association; was for many years a surgeon on the Toronto General Hospital staff. He has been surgeon to the Toronto jail for many years. To those who have had the privilege of hearing Dr. Richardson lecture on Anatomy no words are required. To those who have not heard him all that need be said is that there could be none better. *Bonus atque fidus Magister!*

> "I see an angel hover o'er thy head,
> And with a vial full of precious grace,
> Is pouring now the same into thy soul."

Dr. Uzziel Ogden is one of Toronto's best-known physicians. His pupils, now scattered over the world, are numbered by the thousands. For fifty years he taught medical classes with unfailing attention and

care. It can be said that, during these many years, he never came before his students without special preparation for the lecture of the day. Dr. Uzziel Ogden obtained his license in 1849 from the old Medical Board. In 1852 he was induced to leave Aylmer, where he was practising, and take a position in the staff of the Toronto School of Medicine. At different times he held the chairs of Physiology, Materia Medica, and Therapeutics, and Midwifery and Diseases of Children. In 1887, when the medical faculty of the University of Toronto was revived, he took the chair of Gynæcology, and lectured regularly till the date of his resignation, in January, 1903. Among the many appointments held by Dr. Ogden may be mentioned those of Physician to the Toronto General Hospital, Physician to the House of Industry, Editor of the Canadian Journal of Medical Sciences, Dean of the Medical Faculties of Victoria and Toronto Universities, and secretary and member of the Provincial Board of examiners.

During his long professional career he has witnessed many of the greatest advances known to the healing art. Of Dr. Uzziel Ogden the words of Horace are true in a very special sense: *Doctrina sed vim promovet insitam, rectique cultus pectora roborant.*

Applied to Dr. Ogden fifty years ago, when he began to teach and take a deep interest in medical education, the words of Shelley may justly be quoted, that he

> "Built beyond mortal thought,
> Far into the unapparent."

FRIGHT AND CHLOROFORM DEATHS.

The above is the heading of a leading article in the British Medical Journal for February 21st.

The article refers to the statements made by Dr. J. A. Bodine, of the New York Polyclinic, on the subject of ether and chloroform anaesthesia. Particular attention is directed to the opinion of Dr. Bodine, "that most chloroform deaths are due to vasomotor paralysis, and that deaths from fright occur just in the same way." Two cases of death from fright were mentioned. In one case the patient was very nervous, and the anaethetist placed the cone over the patient's face, and requested him to breathe freely. After a few respirations, he ceased breathing and all efforts at resuscitation failed. Not a single drop of chloroform had been given. In the second case, which was an operation for hemorrhoids, an anema was given. The patient thought this was the commencement of an operation and ceased breathing and died. These two deaths were clearly due to fright. In both cases the abdominal veins

were found after death to be very tense and full, showing that the blood of the body was mainly collected in them, as the result of vasomotor paralysis consequent upon the fright.

All this is quite rational, and is what may be expected to happen from time to time, as deduced from physiological experiments and observations of the effects of fright On April 27th, 1901, R. D. Rudolf, M.D., Edin., M. R. C. P. Lond, of Toronto, read a paper at the Canadian Institute on "Observations on blood pressure with special reference to Chloroform." Dr. Rudolf calls attention to the fact that it is difficult to kill a dog with chloroform when the blood pressure is low. This being the case, why do anaesthetists fear the administration of chloroform when the patient is sitting up? In Dr. Rudolf's words the answer is "most deaths which occur in practice in the administration of chloroform are *not* cases of poisoning from the drug, but *are due to syncope resulting either from pain of an operation commenced too soon, or from fear.*" Sir James Simpson had noticed that a distinction should be made between deaths from chloroform, and during chloroform administration. He was of the opinion that many deaths, while chloroform was being administered, were not caused by it, but were the same as the deaths observed on the table by Brodie, Home, Cooper and others, when no chloroform was given, "Imperfect anaesthesia is the cause of a large number of cases of danger under chloroform."

Dr. Rudolph's paper is a very valuable contribution to the whole subject of the blood pressure under chloroform and the dangers of imperfect anaesthesia. He clearly showed as far back as 1900 and 1901 that fright and pain were more to be guarded against than has been generally considered, and that deaths are frequently due to them alone.

THE GROWTH OF HOSPITALS IN ONTARIO.

In 1881 there were 11 hospitals in Ontario; in 1890 there were 21; and in 1901 there were 53. During the last year several new hospitals have been built. The cost per patient daily in 1881 was 55 cents. In 1890 it had risen to 71 cents, while in 1902 it had risen to 90 cents. It was thus to be seen that the number of hospitals have increased very rapidly. Nearly every good sized town has now a hospital, and several small cities have more than one hospital. In 1881 there was one general hospital in Toronto, whereas at present there are four, and a number of special and private hospitals. The cost has increased from 55 cents a day in 1881 to 90 cents in 1902, or an increase of 64 per cent. Thus while the cost has greatly increased, the grant made by the gov-

ernment for the aid of charity cases has steadily declined. It is now only one-half of what it was some years ago. The total amount paid out last year by the hospitals in Ontario for the maintenance of these hospitals was about $700,000. Of this sum the Ontario Government contributed $110,000. The remainder came from municipal grants, the payment of pay-patients and donations. The various municipalities and the government do not give sufficient to the support of the destitute poor.

BILLS RE VACCINATION AND INEBRIATES.

As there is every likelihood that bills will be introduced at this session of the Ontario Legislature on the important questions of compulsory vaccination, and the care and treatment of inebriates, it would be advisable for the medical profession to take some steps to see that these bills become law in the best form. It is very necessary that there should be no legal enactments, tending in any way to interfere with the rights, or fees, of the members of the medical profession

A DOMINION MINISTER OF HEALTH.

At the meeting of the Canadian Medical Association, held in Montreal last September, a resolution was passed asking that a Minister of Health be appointed for Canada. This resolution was recently submitted by Drs. Roddick, Powell and Lachapelle to Sir Wilfrid Laurier, who promised to give the matter his careful consideration. It was urged that the health matters of the dominion were of such importance as to justify this change. Fifty years ago the expectancy in Great Britain was about 44 years. It is now about 50 years. This is a difference of 6 years, on the average, for each person, or the equivalent of an addition to the population of about 5,000,000 as compared with the expectancy of 50 years ago. This vast change has been effected by improved sanitary conditions. In the face of such a fact, one would think there could not be much question as to the wisdom of the resolution of the Canadian Medical Association.

QUARTERLY MEETING OF THE PROVINCIAL BOARD OF HEALTH.

A meeting of the Provincial Board of Health was held in February. It was reported that there had been 2,500 cases of smallpox and 10 deaths during the year 1902 and that during the same period there had been 290 deaths from scarlet fever out of a total of 3,502 cases.

This year there had been 196 cases of smallpox in January and 10 deaths. In Galt there had been 85 cases and five deaths—not one of latter had been vaccinated. Attention was drawn to the marked protective value of vaccination in other places. It was felt that a more effective vaccination law was urgently required.

A recommendation was adopted to the effect that local Boards of Health provide antitoxine to be used both as a prophylactic and curative agent in the treatment of diphtheria in the poor.

Dr. Amyot reported against the making of the diagnosis of scarlet fever by means of bacterial examinations, as the so-called diplococcus of scarlet fever could not as yet be relied upon as a certain test.

With regard to the discharge of sewage into rivers, it was held that, by the construction of proper tanks and filter beds, the sewage could be purified to such an extent as to render its discharges into streams almost harmless. Towns could be reasonably demanded to conform to these requirements.

THE SMOKE NUISANCE.

THE CANADA LANCET has on a former occasion expressed a very decided opinion upon this question. It is a matter for no small congratulation that this matter is being taken up with some degree of earnestness. The municipal council of Toronto is likely to move in the direction of imposing needed restrictions on the combustion of coal, with a view to abating the escape of unconsumed coal products. Whatever may be done in Toronto is only what may be done in other places. It is now a settled fact that there need be very little unconsumed matter escape, if furnaces are properly regulated.

Some time ago, the British government appointed a competent commission to report upon the abatement of the smoke nuisance. This commission reported that the causes of the escape of unburnt matter are as follows:—

(1) Want of proper construction and adjustment between the fireplaces and the boilers, and the disproportionate size of the latter to the amount of work they are expected to perform.

(2) The deficiency of draft and improper construction of the flues leading to a chimney of inadequate height and capacity.

(3) The carelessness of stoking and management in those entrusted with the charge of the fireplaces and boilers.

The remedy for the first set of conditions is obvious. As regards

deficient draft, various devices are in vogue to supply an adequate amount of air to the furnace fires, having as this object:

(*a*) The admission of sufficient air for complete combustion but no great excess, as such escapes at a high temperature and there is thus a loss of heat.

(*b*) The intimate contact of the air with the fuel.

(*c*) The mixture of air and fuel must be kept for the time at an incandescent temperature.

Any factory furnace which does not consume its own smoke constitutes a nuisance under the British Public Health Act. Some latitude is allowed, however, at the hour of kindling, and throughout the day for periods not exceeding one to ten minutes at a time. The emission of great volumes of unconsumed smoke is both dirty and unhealthy. It is an offence against comfort and health. It can to a very great extent be remedied, and must be remedied.

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

At the meeting of the Royal Medical and Chirurgical Society held on 13th January, Professor T. Clifford Allbutt read a paper upon the above subject. The paper was a very important contribution to the pathology and clinical characters of arteriosclerosis. He stated that "of certain early derivations from the time balance of functions it might be said that, if they did not arise primarily in the circulation, yet that in this system the first evidence of them might be perceived." Of such evidence the fluctuations of arterial blood pressure were very important. The rise of blood pressure in Bright's disease was one of the best-known instances. But there might be some degree of fibrosis of the kidneys, and no rise of pressure. Granular kidney had a special place in pathology. There was much more than mere fibrosis of these organs. It was a mistake to suppose that arterial disease was always accompanied by rise of blood pressure. It was not true of many of the acuter affections of the arteries, and in some of the chronic and involutionary arterial changes a high blood pressure was absent.

It might be said that senile arterial changes could be divided into two classes: those with high blood pressure; and those where the pressure was normal or subnormal. In the first class there was a tendency to death by apoplexy, while in the second class "it was towards obliteration of the cerebral arteries and softening. Pressure depended upon two conditions: diminution of the calibre of the arterial system, and in-

creased viscosity of the blood. The encroachment in calibre must be general. If only in one part, it was usually compensated by dilatation in others. In persons who had led a sedentary life with excess of food it was thought the high pressure was due to change in the blood, which was described as viscosity.

The contention was advanced that arterio-selerosis was a result, rather than a cause, of high pressure. In the high pressure stage and before the arteries became affected, the condition was amenable to medicinal, diatetic and hygienic treatment. He did not believe that high blood pressure was due to contraction of the arterioles from the active influences of their muscle fibres. He admitted that such contraction might be of long enough duration to give rise to an attack of angina; but that it did not last for months or years. It is contrary to experience to have a state of vaso-constriction prevail in all parts at once and continue. Loss of elasticity in the vessels leads to waste of energy and a fall of pressure, provided the calibre of the arterial system be not reduced, or there be the condition of viscosity of the blood. He did not explain what the latter is other than some change in its composition that prevents its free flow through the smaller vessels.

Sir W. H. Broadbent, Sir R. D. Powell, Dr. William Russell and Dr. A. E. Sansom held that active arterial contraction, under the stimulus of some characteristic of the blood, or through the nervous system, was an important factor in the high arterial tension met with in the elderly. Dr. Allbutt's paper will do much good, as it will set the pathologists to work again along somewhat new lines.

THE PREVENTION OF SYPHLIS.

At the last (fifty-third) meeting of the American Medical Association, held at Saratoga Springs, June 10-13, 1902, a joint resolution from the Sections of Cutaneous Medicine and Surgery, and Hygiene and Sanitary Science was introduced in the House of Delegates as follows:

Whereas, there is a burning necessity to check the spread of venereal diseases, and, assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State legislatures and municipalities means not regulamentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal diseases. RESOLVED: That the Section on Cutaneous Medicine and Surgery of the American Medical Association invite the section on Hygiene and Sanitary Science to co-operate with the Section on Cutan-

eous Medicine and Surgery in bringing about a propaganda in the different States, looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government."

This was later submitted to the House of Delegates, which endorsed the action of the Section, and adopted the following :—

"That a joint committee of six from the Sections of Hygiene and Sanitary Science and Cutaneous Medicine and Surgery be appointed by the President to stimulate study in, and uniform knowledge of, the subject of the prophylaxis of venereal diseases, and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium." The Committee on Prophylaxis of Venereal Diseases consists of: Dr. Henry D. Holton, chairman, Brattleboro, Vt.; Dr. Ludwig Weiss, secretary, 77 East 91st St., New York; Dr. George M. Kober, 1600 "T" St., Washington, D.C.; Dr. W. H. Sanders, Montgomery, Ala.; Dr. L. Duncan Bulkley, 531 Madison Ave., New York City; Dr. Frank H. Montgomery, 100 State St., Chicago, Ill.

PERSONAL AND NEWS ITEMS.

Dr. C. W. Walker has located at Thessalon, Ont.

Dr. Bagerow, Toronto, has passed for the M.R.C.S. Eng.

Dr. R. M. Cooper, London, died suddenly on 22nd March.

Dr. McDonagh has returned from his trip to West Indies.

Dr. D. J. Gibb Wishart is recovering from his recent illness.

Dr. W. A. Howell, of Jarvis, died March 23, at the age of 67.

Dr. Nevitt, Toronto, has gone for a trip to the Southern States.

Dr. C. J. Hastings, of Toronto, spent a short time in Baltimore.

Dr. H. H. Chown, Jr., intends practising his profession in Winnipeg.

Dr. and Mrs. H. B. Yates, of Montreal, are taking a trip to England.

Dr. Geo. Elliott and Miss Coutts, both of the Yukon, were recently married.

Dr. and Mrs. C. J. Edgar, of Hartly, have gone on a trip to Bermuda.

Dr. O. Klotz has been appointed resident physician at the Isolation Hospital, Ottawa.

Dr. Standish has gone to Auburn to take the practice of the late Dr. Frank Turnbull.

Dr. Goldwin Howland, of Toronto, has obtained the diploma of M. R. C. P., London.

Dr. Newbond Jones, of the Royal Victoria Hospital, spent a short time in Toronto recently.

Dr. Cowan, Harriston, died recently after a painful illness, for which an operation was performed.

Dr. George Fuller, of Cowansville, was recently married to Miss Belle Boyd, of Montreal.

Dr. Charles Lang, son of Dr H. Lang, of Granton, has passed the examination for the L.R.C.P., London.

Dr. W. L. Harcourt, of Brandon, Man., paid a visit recently to his brother, Hon. R. Harcourt, of Toronto.

Dr. Sutherland, of Kamloops, has been appointed resident surgeon of the Revelstoke Hospital at a salary of $2,100.

Dr. and Mrs. Palmer have been staying at St. Catharines. The doctor is rapidly regaining his strength.

Dr. Knox Niven, son of J. L. Nevin, of London, has gone into partnership with Dr. Roche, M. P., at Minnedosa.

Dr. J. B. Marr has been appointed medical health officer of St. Thomas, in place of Dr. Golden, who resigned.

Dr. Charlton, of Arthur, has commenced practice at Thornhill, in the stand formerly occupied by Dr. Dame.

Dr. Jeffs, of Havelock, has accepted the position of chemist to the Beet Root Sugar Company to be opened at Peterboro.

The Western General Hospital in Montreal finds urgent need for more wards, and proposes the erection of a new building.

Dr. R. W. D. Parker, who had charge of the Boer Camp at Bermuda, was recently married to Miss Burrows, of Kingston.

Barrie's new hospital, the Royal Victoria, was recently opened. It was erected at a cost of $20,000, and has accomomdation for 40 patients.

Dr. J. R. Gunne, of Dauphlin, Man., who has been in Britain pursuing his studies, obtained the F.R.C.S. Eng., diploma. He intends practising in Dauphin.

Dr. Colin A. Campbell, formerly of the Toronto General Hospital, has been appointed resident house surgeon of the Royal Ophthalmic Hospital, London.

Dr. and Mrs. Gilbert Gordon have gone south for some time, on account of the doctor's recent severe illness. They wish to thank their many friends for their kind wishes.

Dr. Andrew Halliday, Provincial pathologist and bacteriologist for Nova Scotia, died in Halifax, March 10, at the age of 37. Very many will regret his untimely death.

Dr. Lorne Robertson, B. A., son of Dr. J. A. Robertson, of Stratford, has been admitted to membership of the Royal College of Surgeons, England.

The League for the Prevention of Phthisis in Montreal is pushing on its work with energy. Among other recommendations is that for voluntary notification of phthisis.

The annual report of the Winnipeg General Hospital shows that the institution is in a prosperous condition, but much in need of more accommodation. Here is a chance for some of Winnipeg's wealthy citizens.

Montreal's Contagious Disease Hospital is to be called the Alexandria Hospital of the Queen. A strong committee has the work of erection in hand. The city has made a grant of $30,000 towards such accommodation.

Dr. Lapthorn Smith, of Montreal, left New York on the 25th March by the White Star liner Cedric for a few weeks visit to Europe, including, a week's stay at Madrid for the International Congress, which opens on the 23rd April, and before which he has been invited to read a gynecological paper. He expects to return by the Tunician on the 14th May.

OBITUARY.

FRANK TURNBULL, M.D.

An attempt to run the River Maitland from Auburn to Goderich in a canoe resulted in the death of Dr. Frank Turnbull, on 12th March Dr Turnbull had been practising for some time at Auburn, and had sold

out his practice with the intention of going abroad for study. It is not known how the accident occurred as he was alone in his canoe. When he was removed from the water every effort was made to resuscitate the body, but in vain. He was a very promising young physician, and a brother of Dr. J. L. Turnbull of Goderich.

JOHN G. GILES, M.D., Ex-M.P.P.

Dr. Giles, of Athens, one of the oldest practitioners of that section, died quite suddenly 12th March in the Brockville General Hospital, whither he had been removed for treatment a week ago.

Deceased graduated as an M.D. at Queen's in 1861, and since then practised his profession at Gananoque, Brockville and at Athens, spending most of his life at Athens, where he was born 69 years ago. He married Miss Caroline Teskey, of Appleton, Lanark County, who, with four children, survive. In 1876 he was elected by acclamation to represent South Leeds in the Local Legislature, filling the unexpired term caused by the resignation of H. S. McDonald.

In military matters he was also prominent, holding a commission as captain in the militia. He had been medical attendant at the House of Industry, Athens, since its institution up to the time of his death.

H. V. WHITE, M.D.

The many friends of Dr. H. V. White of Springfield, will regret to hear of his death at St. John. During his short life of 37 years he had made a wide circle of strongly attached friends in Springfield and in Sussex. He studied medicine at the University of Pennsylvania where his kindness of heart, genuineness, and sincerity of character and exceptional ability made friendships true and lasting and separations keenly felt.

BOOK REVIEWS.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCE EMBRACING THE ENTIRE RANGE OF SCIENTIFIC AND PRACTICAL MEDICINE AND ALLIED SCIENCES.

By various writers. A new edition, completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City. Vol. III. Wm. Wood & Co., New York.

THIS volume consists of 860 pages In articles it embraces from Chloramid to Equinox Spring. There are 676 figures throughout the text, and three full-page colored plates on the isotherms of the world, affection of the cornea, and the membrana tympani in health and disease. The high standard of the previous two volumes is maintained in this one. The illustrations are very clear and expressive. The whole volume is replete with information, while the main articles are of an exhaustive character. The volume is an excellent one for reference. The writers and publishers have spared no pains to keep this volume up to the high standard of the first two volumes. The work when completed will be indeed what its title claims, "A Handbook of Reference of the Medical Sciences."

SAUNDERS' AMERICAN YEAR-BOOK.

The American Year-Book of Medicine and Surgery for 1903. A yearly Digest of Scientific Progress and Authoritative Opinions in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of GEORGE M. GOULD, A. M., M. D. In two volumes—Volume I, including *General Medicine*, Octavo, 700 pages, fully illustrated; Volume II, *General Surgery*, Octavo, 670 pages, fully illustrated. Philadelphia, New York, London: W. B. SAUNDERS & Co., 1903. Per volume: Cloth, $3.00 net; Half Morocco, $3.75 net. Toronto, J. A. Carveth.

We do not know of any similar publication, either American or foreign, that can complete in any way with this excellent Year-Book, published by W. B. Saunders & Company. It is not an indiscriminate collection of extracts clipped from any and every journal; the matter is carefully selected, edited, and in numerous cases commented upon by the eminent authorities whom Dr. Gould has enlisted as his assistants. Every new theory and scientific discovery worthy of the consideration of the profession has found a place in this unusually complete Year-Book; and the names of the several editors are sufficient guarantee of a proper discrimmination. The work comes to us in the same dress as last year—in two volumes. Volume I contains *General Medicine*,

and Volume II *General Surgery*, the volumes being sold separately if desired. As usual the illustrative feature is well taken care of, there being eleven full-page inserts, besides many excellent text-cuts. We strongly recommend Saunders' American Year-Book. These volumes may be consulted with every feeling of confidence. They are great favorites with us.

PROGRESSIVE MEDICINE.

A quarterly digest of advances, discoveries, and improvements in the Medical and Surgical Sciences, edited by Hobart Amory, Hare, M.D., assisted by H. R. M. Landis, M.D., vol. 1, March, 1903. Surgery of Head, neck and chest; Infectious Diseases, including Acute Rheumatism, Croupons Pneumonia, and Influenza; Diseases of Children; Pathology; Laryngology and Rhinology; Otogy. Lea Brothers & Co., Philadelphia and New York, 1903, Price $2.50.

The contributors to this volume are Floyd M. Crandall, Charles H Frazier, Ludvig Hektoen, James B. Herrick, Robert L. Randolf, and A. Logan Turner. These quarterly volumes require no introduction to medical men. They are well known for two reasons: They have been published regularly for many years, and their excellence is universally admitted. The present volume is equal to any of its predecessors. These volumes embody, in a permanent form, the best that has appeared during the quarter.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS, AND PHARMACOLOGY.

FOURTH EDITION, THOROUGHLY REVISED.

By George F. Butler, Ph.G., M.D., Professor of Materia Medica ahd Therapeutics in the College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois, etc. Fourth Edition, Thoroughly Revised. Handsome Octavo volume of 896 pages, Illustrated. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $4.00 net; Sheep or half Morocco, $5.00 net. Toronto · J. A. Carveth & Co.

THE new edition of this commendable work is offered to the profession after a careful and complete revision. The pharmacology and therapeutics of each drug have been thoroughly revised, incorporating all the recent advances made in pharmacodynamics.

In view of a larger experience, resulting in more definite conclusions, numerous modifications have been made in the expressions of opinion regarding the utility of certain drugs, notably the newer synthetics. The chapters on Organotherapy, Serum-therapy, and cognate subjets have been enlarged and carefully revised.

But perhaps the most important addition is the chapter on the newer theories of electrolytic dissociation and its relation to the topic of pharma-

cotherapy, and the relevant discussion added of the simpler relations of chemical structure to drug-action. The profession will undoubtedly greet most cordially this new fourth edition of a work supplying the student of medicine with a clear, concise, and practical text-book, adapted for permanent reference no less than for the requirements of the class-room.

This work is now no stranger to the Medical profession, having been in its hands for six years. The arrangement of the work is a convenient one for reference. There is a very complete index to both the drugs and the diseases for which they may be administered. The work is excellently got up.

A MANUAL OF DISSECTIONS AND PRACTICAL ANATOMY FOUNDED ON GRAY AND GERRISH.

By William T. Eckley, M.D., Professor of Anatomy in the Medical and Dental Departments of the University of Illinois, the Chicago School of Anatomy and Physiology, and the West Side Training School for Nurses ; and Corinne B. Eckley, Demonstrator of Anatomy in the Medical and Dental Departments of the University of Chicago, etc. Illustrated with 220 engravings, 116 of which are colored. Lea Bros. & Co., Philadelphia and New York, 1903. Price, $3.50.

We have here an octavo volume of over 400 pages. It is printed on excellent paper, and with clear type. The illustrations, both plain and colored, are numerous, and merit high praise. The work will prove of special service to those who wish a guide to dissecting or a thoroughly reliable work on practical anatomy for every day reference. We can recommend this book with much confidence.

A TREATISE ON DISEASES OF THE EYE, NOSE, THROAT AND EAR, FOR STUDENTS AND PRACTITIONERS.

By Various Authors. Edited by William Campbell Posey, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polychine ; Surgeon to the Wills Eye Hospital ; Ophthaline Surgeon to the Howard and Epileptic Hospitals ; Member of the American Ophthalmological Society ; and Jonathan Wright, M.D., Attending Laryngologist to the King's County Hospital ; Laryngologist to the Brooklyn Eye and Ear Hospital ; Surgeon to the Manhattan Eye and Ear Hospital ; and Pathologist to the same. Illustrated with 650 Engravings and 35 Plates in Colors and Monochrome. Lea Brothers & Co., Philadelphia and New York, 1903. Price, cloth, $7.00 net.

To say that this is a splendidly got up work is scant praise. It is handsomely bound, the paper is of the finest quality, the illustrations are numerous and beautiful, and the typography of the very best. The volume is a large octavo one of 1238 pages. The work is an encyclopædia on the diseases of the Eye, Ear, Nose and Throat. It is pre-

eminently a work for the general practitioner, as these specialties are fully covered in one volume. There are no less than 27 contributors to the volume. These number some of the very best specialists in the United States, Canada, and Britain. We have much pleasure in mentioning that Dr. Reeve, of Toronto, contributes the section on the diseases of the Orbit, Lachrymal Apparatus, and Lids. It is needless to say that the section is well done. While we mention this section specially we do not underestimate the excellence of the other sections. Taken all in all, it is a work of the highest merit.

THE TREATMENT OF NEURASTHENIA.

By A. Proust, Professor à la Faculté de Médicine de Paris; and Gilbert Ballet, Professor Agrégé à la Faculté de Médicine de Paris; translated by Peter Campbell Smith, L.R.C.P., L.R.C.S., Edin. London: Henry Kimpton, 13 Furnival Street, Holborn, E.C. 1902. Price 5 shillings, net.

In this pretty little book of 200 pages, we have a very able exposition of the disease known as neurasthenia. The author's are so conversant with their subject that there work is very complete and up-to-date. Neurasthenia is a difficult subject to discuss satisfactorily; and one turns with much eagerness to ascertain the opinions of the two authors who have given the matter their careful and prolonged study. They treat the disease under the headings of its nature, its causes, its symptoms and forms, its etiology, its prophyloxis, its treatment in general and of some special forms. The cardinal symptoms of the disease, such as *headache* of a special character, *insomnia*, *muscular asthenia*, *richaolgia*, a peculiar *mental state*, and *dyspepsia*, are attributed to a special state of irritability and weakness of the nerve elements. The remarks on causation and treatment are particularly good. After a careful study of the book, we can speak in the highest terms of its contents. Dr. Smith deserves praise for the excellency of his translation.

BIOGRAPHIC CLINICS, THE ORIGIN OF THE ILL HEALTH OF DeQUINCY, CARLYLE, DARWIN, HUXLEY, AND BROWNING.

By George M. Gould, M.D., Editor of American Medicine. Author of an Illustrated Dictionary of Medicine, Biology, Borderland Studies, The Meaning and Method of Life, etc. Philadelphia: P. Blakiston's Sons & Co. 1012 Walnut St. 1903. Price, $1.00, net.

Dr. Gould has written a classic. This little work will take its place with Hippocrates' Aphorisms, Laennec's Diagnosis, Hunter's Researches, William's Principles of Medicine, Hilton's Rest and Pain, and Balfour's

Senile Heart. Dr. Gould took up his brief to argue a case and he argued it so well that he has convinced both judge and jury of the soundness of his views. It is a genuine pleasure to read a book so fresh and original. One can sit up at night to do it without a thought of reluctance. He shows by quotations from these writers, and from the writings of their friends, that the cause of the many years of ill health of DeQuincy, Carlyle, Darwin, Huxley, and Browning was due to eyestrain, mainly astigmatism. The book concludes with chapters on biliousness and headache, some neglected points in physiology of vision, the discovery of astigmatism and eyestrain, and responsibilities of the profession. The work is written in Dr. Gould's inimitable style. We can very cordially recommend the work. No one will ever be sorry for having read this book.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

At its Twenty-fifth Annual meeting, held in Chicago, Ill., May 30th and 31th, and June 1st, 1901. Official Report of the Proceedings by Frank Hugh Montgomery, M.D., Secretary. New York, Rooney & Otlen Printing Co., 1902.

THIS is a very interesting volume. It contains a number of papers of an interesting and instructive character. The papers throughout are of a practical nature, and from persons of wide experience in dermatological subjects. The work is well illustrated. To those who are interested in dermatology there is much valuable matter in the book. The secretary deserves credit for the excellent manner in which he has got out these transactions.

OUTLINES OF GYNAECOLOGICAL PATHOLOGY AND MORBID ANATOMY.

By C. Hubert Roberts, M. D., London, F. R. C. S., Eng., M. R. C. P. Physician to the Samaritan Free Hospital for Women; Physician to the Out Patients, Queen Charlotte's Lying-in Hospital; late Demonstrator of Midwifery and Diseases of Women, St. Bartholomew's Hospital. With 151 illustrations, mostly original. London: J. and A. Churchill, 7 Great Marlborough St., 1901. Price 21s.

THIS is an octavo volume of 331 pages of printed matter; but as there are a 151 full page plates, the work is really one of nearly 650 pages. The mechanical make up of the book is very fine. All the illustrations are on the best of quoted paper. The illustrations have been executed with much artistic skill. The rest of the paper, the press work, and the binding are all that could be desired, and in keeping with what one would expect from such a reliable publishing house as the Messrs. Churchill.

The work does not encroach upon the domain of treatment. It is a work on the pathology of the diseases the gynaecologist has to handle;

and, for that matter, also the general practitioner who has to take charge of the diseases peculiar to women. The object of the author is to lay a firm foundation for the study and treatment of gynaecological diseases. This is a laudable ambition; and one which, a thorough examination of the volume fully justifies one in saying, has been well carried out.

The chapters of the book are the diseases of the vulva, of the vagina, pelvic inflammation, gonorrhoea in relation to pelvic inflammation, menstruation and its disorders, catarrh of the cervix and endometritis, uterine displacements, imperfect development and malformation of the uterus, sterility, diseases of the Fallopian tubes, ectopic gestation, uterine fibroids, uterine polypi, diseases of the ovaries, cancer of the uterus, diseases of the bladder, diseases of the urethra, of the ureters, micro-organisms in relation to diseases of women. It will be seen by the above arrangement of subjects that the ground is very thoroughly covered.

Throughout the work, much attention is paid to the etiology of these diseases and malformations. This gives a clearer understanding of those portions, more particularly devoted to pathological discussions. In the study of the etiology and progress of these diseases, the closest of attention is paid to the anatomical relationships, as influencing these conditions. On all points, while the author is conservative in his views, he is up-to-date, and definite in the enunciation of his own opinions. Micro-organisms are shown to play an important part in the causation of pelvic inflammations. It is stated that the gonococcus is the only micro-organism of importance found in the urethra. The organisms most frequently found in the vagina are the gonococci, streptococci, and and staphylococci, the tubercle bacillus being rare. In the endometrium the pathogenic organisms are often mixed. Endometritis due to organisms is caused usually by some of the following, gonorrhoeal, tubercular, puerperal (septic), saprophytic (as senile endometritis), diphtheritic (the streptococcic), syphilitic, and fungi and amœbae. In the fallopian tubes, though the tubercle bacillus, the streptococcus and staphylococcus are found, by far the most frequent organism present in purulent salpingitis, is the gonococcus. With regard to the infection of the broad ligament and pelvic peritoneum, the streptococci, staphylococci, and tubercle bacilli are mainly responsible. With regard to the parasitic origin of cancer more proofs must be obtained that these bodies are parasites, and that they are the cause of the new growth.

It would be quite impossible to attempt to review the work in detail, as every chapter would bear the closest scrutiny. Enough has been said to show that it is a work of more than ordinary merit: and, as such, can be confidently recommended to our readers.

DIET AND FOOD CONSIDERED IN RELATION TO STRENGTH AND POWER OF ENDURANCE, TRAINING AND ATHLETICS.

By Alexander Haig, M. A., M D., F. R. C. P., Physician to the Metropolitan Hospital, and the Royal Hospital for Children and Women. Fourth edition with seven illustrations. Philadelphia: P. Blakistons Son & Co., 1012 Walnut street; Toronto: Chandler & Massey. 1902. Price, $1.00.

Dr. Haig is widely known through his book on "uric acid as a factor in the causation of disease." This little volume on diet and food has now reached its fourth edition in the short space of four years. The author points out the relation between urea and albumen in the production of force. The urea excreted by an active adult in 24 hours is $3\frac{1}{2}$ grains to the pound of body weight. It requires 3 grains of albumen to produce these. Taking the weight of an active adult at 150 lbs. the amount of urea per day would be $150 \times 3\frac{1}{2}$, or 525 grains, and this again multiplied by 3 will give 1,575, or the grains of albumen required daily by such a person. Those living a sedentary life will eliminate about 3 grains of urea per pound, old people about 2 grains, while children will produce from 8 to 10 grains of urea per pound daily. This will give the keynote to the amount of albumen required as food at the different ages and under different conditions. If sufficient albumen be not supplied, rapid emaciation results. It would thus appear that an active adult requires 10 grains of albumen per pound of body weight daily, and that 9 grains would be the least that he could do with safely. If the amount of albumen in the diet falls below 9 grains per pound of body weight per day the person becomes weak and is readily fatigued. This tends to destroy his appetite and weaken him still further.

The author then goes on to show that fatigue is due to a general dearth of albumen in the blood, or to a condition in the blood that leads to its defective circulation through the tissues. If there be sufficient albumen in the food and the digestion is good and yet the man fatigues readily the case is too much uric acid in the blood. This excess of uric acid in the blood prevents the albumens in its reaching the tissues, and hence the fatigue. In bringing about the maximum state of endurance, the author urges a diet consisting almost entirely of vegetable products, with the minimum of animal matter.

The book is a most interesting and instructive one. Dr. Haig does not make a book by reading other men's books, but by first making original investigations. There is therefore the flavor of originality about his writings that lend a peculiar pleasure to their persual. We can advise the study of this book with much confidence.

THE LATE D. GILBERT GORDON, B.A.,
M.D., C.M., L.R.C.P., TORONTO.

THE LATE SURGEON LT.-COL. C. R. MACLEAN,
M D., MEAFORD.

THE LATE ANDREW HALLIDAY, M.B.,, C.M.,
GLAS., D.P.H., DUR., HALIFAX, N.S.

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EPHRAIM McDOWELL.

BY WILLIAM LANE LOWDER, B.S., M.D., McKINNEY, KENTUCKY.

Abstracted from *The Physician and Surgeon.*[*]

THE HISTORIC OLD BUILDING.

THIS historic old building, of which the accompanying picture is a good representation, was a model house in its day; but the ruthless hand of time has robbed it of much of its former grandeur. It has seen "yon weary winter sun twice fifty times return," though yet in a fair state of preservation. Within this building, in the midnight darkness, Ephraim McDowell lighted the torch which has shone forth with resplendent glory in this brilliant noonday of abdominal surgery. Beneath this time-worn roof was laid the foundation for a great revolution in the *ars chirurgica;* and as a sequence there goes forth a benediction to every hamlet in the known world; from every hearthstone in Christendom there returns a blessing to the memory and the last resting place of Ephraim McDowell.

"Chirurgica's towers, thy lights resplendent blaze,
Dries woman's tears and lengthens out her days.
McDowell and Sims, of our Columbia's clime,
Began the work, moved onward, nigh sublime.
To woman, then, these blessings shall be given,
Queen of the home, and home the type of heaven."

"Within this home the soul has fared,
And from this throne its ventures dared.
What bounteous visions filled this spot?
What dreams of pleasure long forgot?
Nor hope, nor joy, nor love, nor fear,
Have left one trace of record here.

It was within this sacred precinct that the operation was first performed which carried the light of life into the shadows of impending gloom—the message of hope into the realms of despair; opening the prison to them that were bound and giving beauty for ashes—the beauty of a newborn existence, of youthful and happy maternity, in place of ashes for which the inevitable urn seemed already waiting.

"Within these walls was life's retreat
This space was thought's mysterious seat,"

where the origin of the great thought, and still greater courage, that gave expression to the thought that, without the sanction of precedence,

[*] The cuts were kindly loaned by Dr. J. W. Keating, the Editor of *The Physician and Surgeon*, Ann Arbor.

and unaided by the advice or sympathy of others, culminated in the institution of an operation by which thousands of *fair women*, heretofore doomed to *early death, now live* to revere his name; and when the granite shaft, which a grateful profession has erected above his ashes, to signalize what he was, and what he did, shall have fallen into decay—

> "His silent voice will plead for thee
> When time unveils Eternity."

And these hands which have wrought so untiringly for science and humanity—

> "These hands a richer meed shall claim
> Than all that wait on wealth or fame."

House as it appears in Danville, Kentucky, to-day, in which Doctor Ephraim McDowell, in December, 1809, performed the first ovariotomy.

On a bleak and barren December day, in 1809, when the wood—the oak, the aspen and the willow were leafless; and not a thrush had yet essayed to clear the furrowed brow of winter; history tells us that this symbol of alarm, as a sentry perched on the office door of a village surgeon, witnessed the gathering of an excited and angry mob. The sheriff of the county at that time interfered, and effected a compromise; if such it might be called; in which he stated, that in case the patient recovered from the effects of the operation, all would be well with him; but in case she succumbed to the results of the surgical procedure about to take place, he would be at the hands of a merciless mob. Chill and

cheerless must have been the comfort around him. His feelings, no doubt, were expressed by the following couplet:

"Truths would you teach to save a sinking land
All shun, none aid you and few understand."

Chagrin and disappointment appeared to hang frowning around him, and its very apparition seemed to haunt his every motion, but soothed and charmed by the fitful visits of the happy reflection of self-sacrificing deeds done for the good of suffering humanity, and crowned as in a vision, with the holy wreath, he seemed to wanton in a fairy land, and view the Elysian fields of Paradise. The operation was successfully completed; and the wild flowers of sunshine sprang as it were beneath his boyish tread; opening in advancement, expanding in maturity, and enriching his pathway with all the richness of luxuriance. This household genius alarmed the threshold of a happy and an honorable home, whose master, as he had bravely answered to signals of duty here below, so when the greater summons came, he as truthfully answered that, and laid down the milk white flower of a stainless life.

"His deeds will shine forever bright,
When sun and stars are set in night."

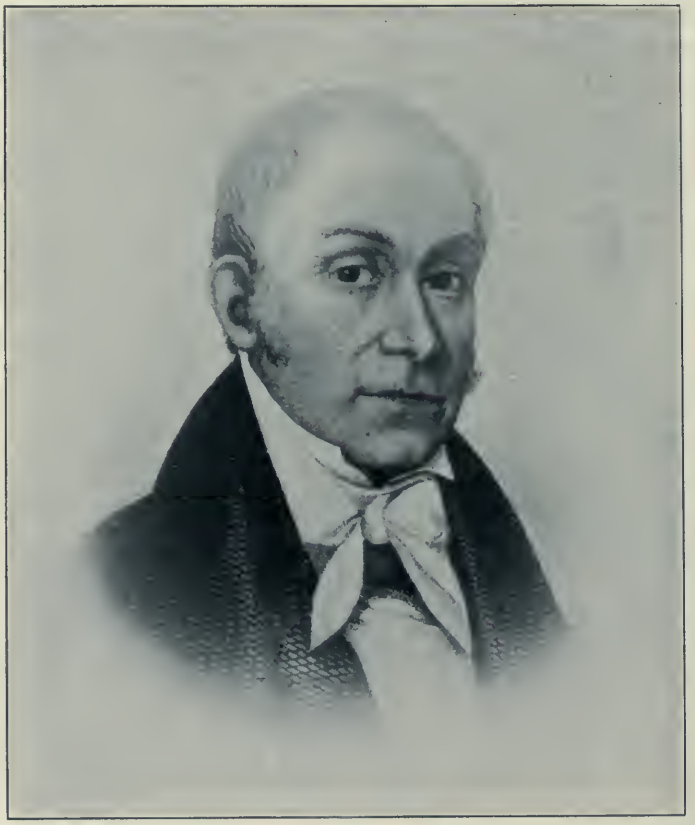
Should a student of medicine, in centuries hence, ask who first performed ovariotomy, the answer would be ready and unequivocal. The noble men of this class responded to the summons of Providence for a glorious work, and, like the chosen of old, many closed their work with the blood of martyrdom. Greater heroism was never displayed by man or woman.

Biography of McDowell.

Dr. Ephraim McDowell, in his day, the greatest surgeon of Kentucky, and renowned in the history of medical science as the "Father of Ovariotomy," was born in Rockbridge County, Virginia, November 11, 1771, and died at Danville, Kentucky, June 20, 1830, aged fifty-eight years. He came with his father, Judge Samuel McDowell, to Danville, Kentucky, in 1784; was liberally educated at Georgetown, Kentucky, studied medicine in the office of Dr. Humphreys, of Staunton, Virginia; went to Europe in 1793-4, and studied medicine in the University of Edinburgh, Scotland, and during part of that time was a private pupil of the famous Dr. John Bell; returned to Danville in 1795. In a hallowed spot, a typical American home, November 11, 1771, Ephraim McDowell first saw the light, and doubtless on a night when nature was in her wildest mood. Outside of the immediate household it was an event of no moment, and about which none seemed especially to care. Little did they dream that the occasion was prophetic of a genius des-

tined to lay the foundation for a great revolution in the *ars chirurgica*, and to become one of the greatest benefactors of the human race.

It has been truthfully said that great men, like great mountains, stand alone, with the valley of ancestry on the one side, and the gulf of posterity on the other. But history tells us, however, that this towering character did not stand alone, for the foothills of his ancestry were of decided magnitude. Excepting Doctor Brashear, of Bardstown (the first



EPHRAIM McDOWELL, M.D.

surgeon in the United States who successfully performed amputation at the hip-joint), early Kentucky and the West had no surgeon of distinction. The fame of Doctor McDowell's foreign tour and study drew to him a large practice; and for nearly a quarter of a century, until Doctor Benjamin W. Dudley, of Lexington, rose to eminence, he had almost undisputed possession of the surgical field of Kentucky and the Southwest "He was monarch of all he surveyed." He occasionally operated in the

adjoining states; and patients came to him from hundreds of miles of distance. But his imperishable fame—that which has made him distinguished in every land, throughout the world, where medicine is cultivated as a science—sprang from the fact that he was the *first surgeon in the world who performed the operation for the removal of diseased ovaries.*

At Danville, Kentucky, he removed an ovarian tumor from a Mrs. Crawford, in December, 1809, thus inaugurating an operation for the cure of a hitherto almost inevitably fatal affection, one that had repulsed every assault of science. McDowell performed this operation thirteen (13) times, with eight (8) recoveries (over sixty-two and one-half per cent); this, too, long before the days of anesthesia—chloroform, ether, et cetera, and when Danville was a mere village. The average length of life in a woman, after an ovarian tumor is discovered, which is not removed by operation is but two years, and those of much suffering. This wonderful operation has, within ninety-three years past, 1809-1902, in the United States and Great Britain alone, directly contributed more than ninety thousand (90,000) years of active and useful life to the women thus relieved. A remarkable fact and coincidence in medical history is—that while Kentucky's earliest great surgeon originated ovariotomy, Kentucky's recently deceased great surgeon, Doctor Joshua T. Bradford, *excelled the whole world* in successfully performing it, ninety per cent. of his cases recovering.

Doctor McDowell courted, to use a common parlance, a Miss Sallie Shelby, daughter of Governor Isaac Shelby, first governor of Kentucky. His life in simplicity and purity is one well worthy of record. In regard to this courtship but little can now ever be known. Whether it was of the Enoch Arden character, or that of Robert Burns and Mary Campbell, will never now be positively known. History tells us that she was a winsome lady; as well as McDowell was a handsome man. Their ashes repose in the family burying lot at Danville, Kentucky.

It is but fitting in passing, while noting the qualities of this great surgeon, to not overlook the virtues and attributes of his noble wife. His *success* was doubtless due, in a great measure, to *her* own untiring efforts. She has never been mentioned in history alongside of this great man. Brethren, it pays to note what the thoughtless might call the "little things" of this world. Oftentimes, on the long and lonesome ride, "when twilight dews were falling" and the "evening shades appeared" as a token of "parting days," this little hand lifted the gate-latch to a worn, weary, and an affectionate husband. We can imagine the résumé of their reveries. Fifteen years ago the writer sat beneath

the gifted and eloquent voice of Doctor Edward R. Palmer, years since departed, in the old lecture hall of the University of Louisville. From his "Farewell address," which was a matchless production of its kind, I quote a little from memory. Among many good things which he said,

Monument erected to the memory of McDowell by the Kentucky State Medical Society.

in fact all that he said was good, he alluded to the embryonic doctor's future wife. At that time none, or but very few of the class were married. His words are ringing in our ears yet.

McDowell's Monument.

Beneath this granite shaft repose the sacred ashes of the "Father of of Ovariotomy;" doubtless, scarcely a vestige of his mortal remains could upon investigation be discovered—he having long since, "mingled his bones with the dust."

On the front face of this monument is a medallion of McDowell, and beneath it a tablet bearing the inscription:

"A Grateful Profession Reveres His Memory and
Treasures His Examples."

On the remaining tablets, on the different sides, are further inscriptions as follows:

"Beneath this Shaft Rest the Remains of
Ephraim McDowell, M.D., the Father of Ovariotomy."
"By Originating a Great Surgical Operation,
He Became a Benefactor of His Race,
Known and Honored throughout
the Civilized World."
"Born in Rockbridge County, Virginia, November 11, 1771;
Attended the University of Edinburgh, 1793–4;
Located at Danville, Kentucky, in 1795;
Performed the First Ovariotomy in December, 1809.

"When riding along fields of waving grain, from which the ripening odor has filled the air with all its fragrance; along dusty highways beneath the scorching rays of a torrid sun, when the din of the harvester is heard in the distance and the carol of the lark recalls to memory happier days gone by; stop and let the horse graze. Pluck a violet from a hedge near by. Tenderly carry it home and offer it as a gift to that little woman who has been waiting the approach of your footsteps for doubtless many weary hours. Pin it upon her breast—that breast which you once promised to protect and support. The intrinsic value of a little flower, as all well know, is comparatively nothing; a penny would buy it anywhere, were it available. But to her it means a great deal. It makes you know that *you thought of her*. In hanging out your sign let her have a word to say. She knows more than the thoughtless public might imagine. It may be a little *too high*, or a little *too low*, but that *soft hand* that has guided us in matters of more magnitude, can surely guide us in this."

The good people of Danville would honor their town and themselves by erecting, in their court house yard, a monument of marble or statue of bronze to this great benefactor of the human family. In the "Lives of Eminent American Physicians and Surgeons of the Nineteenth Century," Doctor S. D. Gross says of him: "Had McDowell lived in France he would have been elected a member of the Royal Academy of

Surgery, received from the king the Cross of the Legion of Honor, and obtained from the government a magnificent reward—as an acknowledgement of the services he had rendered his country."

The McDowell family, in its various branches and connections, is one of the most distinguished in Virginia and Kentucky. When John McDowell, of Rockbridge county, Virginia, was killed, he left three children. Of these, Samuel, the eldest, with his wife, Mary McClung —leaving in Virginia his eldest daughters, twins and married—emigrated to Danville, Kentucky, in 1874, with seven sons and two daughters. Of these, the sixth son, Doctor Ephraim McDowell and two of his brother John's children, married two daughters and a son of Governor Isaac Shelby, hitherto mentioned. Major General Irvine McDowell, of the United States army, was a near relative of Doctor Ephraim McDowell. Doctor McDowell was a man who lived greatly in advance of his days; to use the language of Tennyson—

> "He dipped into the future,
> Far as human eye could see."

Stepping from the "wearied summit" of fifty-eight years, he passed into that realm of spirit life toward which he had long looked and wondered, and to these celestial employments, which await such souls as his, in the Great Beyond.

> "At last the rootlets of the trees
> Shall find the prison where *he* lies,
> And bear the buried dust they seize
> In leaves and blossoms to the skies."

Scene of the McDowell Monument.

It was a cool afternoon in July, and the shadows were falling eastward on fields of waving grain and lawns of emerald velvet. Overhead a few light clouds were drifting, and the green boughs of the dreaming cypress were gently fanned by a light wind from the west. There was the sound of the whetting of a scythe, and near by, the twittering of many birds upon a cottage roof. On either side of the main thoroughfare, which runs like a white rivulet through banks of green, thorny hedges were shining, and the bright sod was spangled with all the wild flowers of a Kentucky summer. An odor of lime trees and of new-mown hay sweetened the air for miles and miles around. Far off to the west, in the horizon's verge, just glimmering through the haze, rises the lofty canopy of old Centre College; and a passer-by tells me this is McDowell Park. If peace dwells anywhere on this earth, its dwelling place is here.

The visitor comes into this ancient churchyard—now known as McDowell Park, having long since been abandoned for burial purposes—

by a pathway leading from a stone turn-stile at the street, through the park; and in one moment the whole world is left behind and forgotten. Here is a scene similar to the one from which Gray's Elegy was written. Here are the "nodding elms"; here is the "yew tree's shade"; here "heaves the turf in many a mould'ring heap." All these graves seem very old. The long grass waves over them, and some of the stones that mark them are entirely shrouded with ivy. The lettering on many of the "frail memorials" has become almost obliterated by the passing of the seasons. None of them are neglected or forlorn, but all of them seem to have been scattered here in that sweet disorder which is the perfection of rural loveliness. There never, of course, could have been any thought of thus creating this effect; yet it remains to win the heart forever. And here, amid this mournful beauty, the old church itself nestles close to the ground, while every tree that waves its branches toward it, and every vine that clambers on its surface, seems to clasp it in the arms of love. Nothing breaks the silence but the sighing of the wind in the trees beneath which the visitor muses, and where the brown needles, falling through many an autumn, have made a dense carpet on the turf. Now and then there is a faint rustle in the ivy; a fitful bird-note serves but to deepen the stillness; and from a rose tree near at hand, a few rose leaves flutter down in soundless benediction on the dust beneath. There is no need here of "storied urn or animated bust." The whole place is his monument, and his original operation—giving health and happiness to "countless thousands" yet unborn gives to the soul of the place a form of seraphic beauty and a voice of celestial music—is his immortal epitaph.

> "Here scattered oft, the earliest of the year,
> By hands unseen, are showers of violets found;
> The redbreast loves to build and warble there,
> And little footsteps lightly print the ground."

McDowell's life is one of the best ever recorded in the history of medical literature. It was one of the best lives ever recorded in the history of medicine. It was a life singularly pure, noble and beautiful. In two qualities, namely, sincerity and reticence, it was exemplary almost beyond a parallel; and those are qualities which professional character in the present day has great need to acquire. McDowell was averse to publicity. He did not sway by the censure of other men; neither did he heed their admiration as his breath of life. Surgery, to him, was a great art; and he added nothing, or but little, to surgery until he had first made it as nearly perfect as it could be made by the thoughtful, laborious exertion of his best powers, superadded to the spontaneous impulse and flow of his genius. History tells us that the

result of this great operation was recorded on *three sheets of paper*. And Doctor Johnson, editor of the *London Medico-Chirurgical Review*, as that time refused to publish it, on account of the article being so short and illy written. Many voluminous writers have sneered at him because he wrote so little. The most colossal form of human conceit, probably, is that of the individual who thinks all other creatures inferior, who happen to be unlike himself. The reticence on the part of McDowell was, in fact, the grand emblem of his sincerity and the corner-stone of his imperishable renown. There is a better thing than the great man, who is always speaking, and that is the great man who only speaks when he has a great word to say. McDowell has left to posterity but little recorded literature; but his great operation was perfect at the time when it was performed, supreme and unapproachable. He did not test merit by reference to ill-informed and capricious public opinion, but wrought according to the highest standards of art which learning and taste could furnish. His operation forms an English classic. He was a man whose conduct of life would, first of all, purify, extend and adorn the temple of his own soul, out of which should afterward flow, in their own free way, those choral harmonies that soothe and exalt the human race. He lived before he wrote? The soul of the operation was the soul of the man. His operation is the first of its kind recorded in history—it was his thought—which he has somewhere expressed in better words than these—that human beings are only worthy those feelings endured which are engendered when death has just taken from us the objects of our love. That was the point of view from which he habitually looked on the world; and no man who has learned the lessons of experience can doubt that he was right.

Concerning the Patient.

It is but fitting justice in passing to notice the heroic character of the patient—Mrs. Crawford—living sixty miles southwest of Danville on Green River, in Green County, Kentucky. Dr. McDowell faced dangers from storm and flood, in clouds and darkness at night, at times lost in the dense forest. He was actuated by the higher principle of his profession. He feared neither man nor devil; he knew no fear except that of doing wrong and the fear of God. The degree of his happiness was determined by the magnitude of his undertaking.

As has been previously stated, Doctor McDowell was called in December, 1809, to attend a Mrs. Crawford, suffering from an ovarian tumor, and at once suggested its removal. But he stated to her that, so far as he knew the operation had never been done—that it would be an experi-

ment; consequently he could make no promise to the outcome: By his manly presence and honest words he planted a new hope in the heart of despair. Thus, "he unlaced the bosom of confidence with the key of personal magnetism."

The now historic patient gave her assent to the operation, which was performed as before mentioned, at Danville, Kentucky, in December, 1809. History, or tradition rather, says that McDowell, before beginning his operation, offered up a prayer. Whether or not this is true, will perhaps never be positively known, as McDowell has been at rest seventy-two (72) years, and the oldest citizen now living in Danville could have only been a small boy at the time of the interment. This prayer, in literary merit and fervency, it is claimed by scholars has never been surpassed and seldom equalled by mortal man. What an example of true courage and resolute devotion was exhibited by this heroic, good, kind, gracious, loving and lovable man! No truer heroism has been or ever will be recorded on the never ending pages of immortal history. True courage must be deliberate, must be premeditated, must be actuated by a high, a holy and beneficent motive. It was not a maddening pseudo-heroism stirred up by the rattle of the drum and the shriek of the fife, a dash on battlefields, where man seeks to slay his fellow man. The heroism of Hannibal, Alexander, Xerxes or Napoleon, can never be compared with this cool, calculating man.

In 1817 "Three Cases of Extirpation of Diseased Ovaria," the first publication of ovariotomy, was made known to the world. It was long before Europe could believe that such a brilliant, original and magnificent improvement could originate in what was then known as the "backwoods" of America, but she has been apprised many times since of the genius of America's physicians and surgeons. In 1827, Dr. Johnson, editor of the *London Medico-Chirurgical Review*, after announcing the results of five cases of ovariotomy, four of whom had recovered, says: "There were circumstances in the narrative of the first cases that raised misgiving in our minds for which uncharitableness we ask pardon of Dr. Ephraim McDowell, of Danville, Kentucky, and of God." What a noble confession! This gracious man now rests in the "Silences," but his work abides and thus will it continue to live on and on, down through the ringing grooves of endless time, as a benediction to "countless thousands" yet unborn.

THE DUTY OF THE STATE IN REGARD TO TUBERCULOSIS.

By C. D. MURRAY, M. B.
Physician to Victoria Genera Hospital, Halifax, N. S.

I PROPOSE to-night to address to the members of this branch of the British Medical Association a few remarks on what I consider the duty of the State in regard to tubercular diseases. The subject is one which has been much discussed in medical societies and the medical press, and has received hardly less attention from the lay press and other lay organizations.

One would suppose, and rightly too, that on so hackneyed a subject there was little more to be said. The views held almost unanimously by medical men, have appealed so clearly and so reasonably to the thinking public, that it seems a work of supererogation to reopen the subject and spend time on the discussion of so thread-bare a theme, but the necessity will appear when we realize the astounding fact, that in spite of the unwonted unanimity of a profession, whose capacity for differing among themselves is proverbial; and the still more unusual agreement of the great public with the medical profession, our ruling authorities, municipal, civic, provincial and federal, have allowed the condition of affairs to remain to-day in practically the same state as existed 25 years ago, before the contagious nature and bacillary origin of tubercular disease was accepted or even recognized.

A few public-spirited and philanthropic persons, in Ontario and Quebec, have gone so far as to provide institutional treatment for a limited number of curable cases of pulmonary tuberculosis, a provision totally inadequate even to the demand which it is designed to meet. A few public meetings and conventions have been held—gatherings, mostly of individuals prominent in the various walks of life, and presided over by great dignitaries. Some very eloquent and sympathetic speeches have been delivered, some laudable resolutions have been unanimously adopted, a few promises have been exacted from politicians, and a few laws have been enacted by our rulers; but here the matter has been allowed to drop. We stand as a community to-day practically as we did 20 years ago and those suffering from tuberculosis are, if anything, worse off than formerly, because advanced cases are no longer freely admitted to our general hospitals, while at home they are shunned and avoided by panic-stricken and partially informed friends or relatives.

The eminent persons who spoke so eloquently and sympathetically, and who moved and seconded such admirable resolutions, have probably considered their whole duty in relation to tuberculosis performed, and

are now engaged in some other campaign against unrighteousness. The politicians who promised so well have probably forgotten all about their pledges, the resolutions adopted have been tied up with red tape and relegated to official pigeon holes, and the few laws and regulations enacted have become practically a dead letter.

While I can hardly hope to add anything to what has been so eloquently said and so thoroughly argued, or even to place matters in a new light, I hope, by reiterating what you are all familiar with, to impress upon this Society—which I think was the first organization in the Maritime Provinces to bring this matter under the notice of the public authorities—the importance of its being unceasing in its efforts both collectively and as individuals, to force our public bodies to do their duty towards the prevention and cure of tuberculosis. Men in other walks in life may gain *kudos* by public action in this regard, and may by rhetorical display, raise a temporary enthusiasm; but we, as medical men, with the responsibility of our certain and definite knowledge, must in season and out of season keep the matter before the notice of those who make and who enforce our laws.

The Dominion, by its federal laws regulating quarantine and immigration, the Provinces by the appointing of Provincial Boards of Health and Provincial Bactereologists, and our civic and municipal authorities by the establishment of Health Boards, the appointments of Health Officers, and the enactment of sundry laws, have endorsed the policy and accepted the duty of restricting the ravages of controllable disease.

The more so have our own Province and Municipality by the establishment and maintenance of General Hospitals, Insane Asylums, and Isolation Hospitals, admitted that the care of the sick, the insane and those suffering from contagious disease, come under their direct care and charge, and that the duty of providing for the housing and treatment of such, belongs to the public bodies which govern us.

Further even than this, has parentalism gone in our own and other free countries. It has even ventured in the interest of the safety of the community, to assume the power of compulsorily enforcing vaccination—compelling thus an individual in good health to undergo a miner ailment, in order to remove a natural susceptibility to a dangerous contagious disease. It has further insisted that when contagious disease is discovered, it must be reported and, if required, isolated.

Surely the duties and privileges of the State in regard to tubercular disease can no longer be gainsaid, nor should the public nor the medical profession longer silently tolerate the neglect to provide and enforce the obviously necessary means for restricting this dangerous and widespread disease.

The protection of the citizen is the highest duty of the State; each healthy and wage earning individual is an asset, valuable according to his capacity for work. There is no greater destroyer of health and life than consumption in our Dominion to-day, and its economic importance is enhanced by the fact that the victims, now commonly attacked, are young adults, who, after incurring the expense of rearing and education, are on the threshold of the most productive period of life. Rich and poor it equally attacks, and often casts upon the street the orphan to become the pauper, the criminal, and the prostitute.

Laws have been enacted to regulate the sale of poisons, to prevent the adulteration of foods, and for the protection of employees against accidents and oppression. Why should this scourge alone be allowed to pursue its ravages unchecked?

Having, I think, pretty conclusively demonstrated the responsibility of the State, I would like to suggest briefly the means which I think should be taken to remedy the existing condition of things.

1. As ignorance must bear much of the blame of this dread disease, I hold it is the duty of the educational authorities to provide for the instruction of both child and adult in the school and lecture hall, as to cause, prevention and cure of tuberculosis, not by text-books and speeches containing an exaggerated misstatement of facts, as has been attempted by the over-zealous opponents of alcohol and tobacco; but by an honest and unbiased explanation and exposition of the subject, which will leave no room for controversy and disagreement, and which, placed in simple language and lucid form, will appeal to all classes of intelligence. The campaign of education for the adult might be carried out by local and itinerant lecturers, who should be medical men or others thoroughly familiar with the subject, and able to give expression to their ideas. The schoolmaster, when himself instructed, should, with the aid of suitable text-books, be able to adequately instruct the child.

2. Laws governing the ventilation, heating and cleanliness of schools, churches, public buildings and workshops should be enforced as well as enacted, and an organized system of inspection instituted.

3. Physical culture should enter largely into the regular curriculum of every school and college; and this instruction and exercise should, in the elementary classes and in the earlier years, bear a much greater proportion to the hours of mental cultivation than is usually suggested. Can you picture the condition of physical development of a generation of school children who had devoted, say one-half of their school hours to physical exercises and calisthenics under capable and diligent instruction? Why, one might almost hope thus to develop a race of giants.

At any rate we would surely see fewer puny and ill-developed children grow up to an immature adult condition, the easy prey of tuberculosis and other diseases.

4. For the prevention of the spread of the contagion, the State must enact and enforce laws for the better protection of our sources of meat and milk supply; must insist upon all cattle intended for human food being killed in public abatoirs, under competent and efficient supervision; that all milch cows be frequently inspected, and housed in clean and well-ventilated buildings; that the surroundings of all dairies be scrupulously clean; and that tubucular persons be prevented from contact in any way with our food supply.

5. The laws against expectoration in public buildings, conveyances, parks and even streets should, where existent, be strictly enforced, and where not existent at once enacted. Such prevention of expectoration would soon eliminate the tubercle bacillus from the dust that is ordinarily scattered around and freely inhaled. The fumigation and cleansing of houses in which the tubercular have lived or died, should be scrupulously carried out under the guidance of competent inspectors.

6. Next I hold the State—Federal, Provincial and Municipal, individually or by a joint contribution from all three—should provide sanatoria and hospitals adequate to accommodate the tuberculous sick. These institutions should be graded for the reception and care of the various forms and degrees in which the disease is found. The curable cases should be treated separately from those for whom there is no hope, and persons who are able to contribute wholly or partially to their own support should be separated from those who become wholly a public charge. The provision of sanatoria for incurable cases will, in addition to providing homes for such as are helpless sufferers, eliminate a great source of the propagation of the tubercular contagion, and contribute to the ultimate extinction of the disease. On the other hand, the cure of a large number of early cases, and their return to their occupations as wage-earners, will be a matter of no little economic importance to their families and to the State.

7. Notification of the disease in its earliest recognizable stages, must be insisted on, and where proper safeguards and treatment cannot be secured at home, the subject should be removed to a sanatorium. This, after proper education of the public, would not be looked upon as a hardship by the patient or his friends, and it would probably require little more than public opinion to enforce it.

I fear I have already trespassed too long upon your time in discussing such a threshed out subject, and can only hope that every member

of this Branch will agree with me, that this disease cannot be cured or stamped out by the efforts of private benevolence alone, and that it is the duty of the great public, through its representatives elected with the mandate to faithfully govern the State, to take immediate steps to put in action the various means which it is agreed by all will be in time effective in abolishing the danger and suffering caused by tuberculosis.

The money to be expended by our rulers will not be great, considering the enormous results to be obtained; and the public has long ago given them the mandate to enact the laws required.

ONTARIO MEDICAL ASSOCIATION.

By JOHN HUNTER, M. B., Toronto.

IN June we have our annual meeting of the Ontario Medical Association and in September the Dominion Exposition. These gatherings have one great purpose in common, that is the diffusion of knowledge; but, as so many physicians do not appear to set any value on medical societies or associations, it may be of some interest to enquire whether these industrial gatherings are of any use to our farmers and manufacturers.

It is well within the memory of many of us who are not yet aged, though bearing about on our bodies the wrinkles, bald scalps, or gray hairs, the stigmata of age, to recall the time when our industrial classes were circumscribed by a very limited horizon. The young farmer was quite content to follow in the traditions and methods of his forefathers. and the manufacturer never thought of going beyond his own neighborhood for orders. A few decades ago there came a demand for a wider outlook, isolation became intolerable, the value of association began to be realized, and the result was the inauguration of townships and county fairs, provincial, national and international expositions, special courses in our universities, and the establishment of agricultural colleges and schools for manual training and domestic science. So long as our farmers and manufacturers remained isolated units, there were stagnation and degeneration, but when opportunities were provided for study, for the interchange of ideas, comparison of methods, competition in skill and ingenuity, progress and prosperity began, and today we are successful competitors in all the markets of the world, and our trade returns show a commercial activity that compares favorably with that of the foremost nations.

The same principles that aid industrial prosperity, are equally potent in advancing the science and art of medicine. Here too, isolation

means stagnation and degeneration, and yet for decades men have graduated from our schools and colleges, have gone out to settle in our villages, towns and cities, without ever giving a thought about keeping up or reviving old friendships or forming new ones. These men so completely isolate themselves that were it not for their door plates or creaky signs their fellow practitioners would never know of their existence. Call on one of the more prominent physicians in any of our towns or cities and ask him about his confrères. How often the answer will be, "Well there are a lot of fellows, I don't know ; They never attend a medical meeting and I have no chance of getting acquainted with them." This isolation is deplorable for it is the status of the rank and file, "the privates in our great army, the essential factor in the battle" that gives to our calling its status and influence. The public knows, or cares, very little for the great names in medicine, but it quickly forms an estimate of the worth, and dubs as "Doc" the man who is loose in morals and habits, illiterate and impure in language, antiquated and slovenly in his methods, or most respectfully salutes as Doctor, the physician of moral and temporate habits, refined and pure in language, scientific and skilful in his methods.

The reader may think the above a rather pessimistic view, but here are a few sentences from a recent address of Prof. Wm. Osler : "But let me say this of the public, it is rarely responsible for the failures in the profession. Occasionally a man of superlative merit is neglected, but it is because he lacks that most essential gift the knowledge how to use his gifts. The failure in 99% of the cases is in the man himself ; he has not started right. The poor chap has not had the choice of his parents, or his education has been faulty, or he has fallen away to the worship of strange gods, Baal, or Arhtoreth, or worse still, Bacchus. But after all the killing vice of the young doctor is intellectual laziness. He may have worked hard at college but the years of probation have been his ruin. Without specific subjects upon which to work, he gets the newspaper or the novel habit and fritters his energies upon useless literature. There is no greater test of a man's strength than to make him mark time in the "stand and wait" years. Habits of systematic reading are rare and are becoming more rare, and five or ten years from his license, as practice begins to grow, may find the young doctor knowing less than he did when he started, and without any fixed educational purpose in life."

Now in practice, however important it may be to find the morbid condition, it is of more importance still to be able to suggest a line of treatment that will restore the patient to health again. We have

diagnosed the morbid conditions arising out of isolation, so it is now in order to suggest the remedy and the one that can be most highly recommended is the Medical Society or Association. On the educational value of the Medical Society I am sure the reader will appreciate the following terse and practical words of Osler. "The first and in some respects the most important function is that mentioned by the wise founders of your parent society—to lay a foundation for that unity and friendship which is essential to the dignity and usefulness of the profession. Unity and friendship! How we all long for them and how difficult to attain! Strife seems rather to be the very life of the practitioner, whose warfare is incessant against disease and against ignorance and prejudice, and, sad to have to admit, he too often lets his angry passions rise against his professional brother. * * * The Society comes in here as a professional cement. The meetings in a friendly social way, lead to a free and open discussion of differences in a spirit that refuses to recognize differences of opinion on the non-essentials of life, as a cause of personal animosity or ill-feeling, an attitude of mind habitually friendly, more particularly to the young man, even though you feel him to be a David to whom your kingdom may fall, a little of the old fashioned courtesy which makes a man shrink from wounding the feelings of a brother practitioner—in honor preferring one another. With such a spirit abroad in the Society and among its older men, there is no room for envy, hatred, malice, or any uncharitableness. It is the confounded tales of patients that so often set us by the ears, but if a man makes it a rule never under any circumstances to believe a story by a patient to the detriment of a fellow practitioner, even if he knows it to be true, and though the measure he metes may not be measured to him again, he will have the satisfaction of knowing that he has closed the ears of his soul to ninety-nine lies and to have missed the hundredth truth will not hurt him. Most of the quarrels of doctors are about non-essential, miserable trifles and annoyances—the pin pricks of practice—which would sometimes try the patience of Job, but the good-fellowship and friendly intercourse of the Medical Society should reduce these to a minimum.

"The well-conducted Medical Society should represent a charming house, in which every physician of the district would receive his intellectual rating, and in which he could find out his professional assets and liabilities. We doctors do not "take stock" often enough and are very apt to carry on our shelves stale, out-of-date goods. The Society helps to keep a man 'up to the times' and enables him to refurnish his mental shop with the latest wares. Rightly used, it may be a touch-

stone to which he can bring his experiences to the test and save him from falling into the rut of a few sequences. It keeps his mind open and receptive, and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine." These sentences present this phase of the subject so fully and felicitously, that nothing more need be said on the importance of the educational value of the Medical Society.

In the preceding paragraphs an effort has been made to show the need for, and the value of, the Medical Society or Association. It remains now to discuss the Ontario Medical Association *per se*. This Association has years enough behind it to claim a fair show of reverence for its age. Each decade since its origin has found it steadily growing in favor and influence with the profession throughout the province. In its presidents we have a long list of notable names—names that stand for the best traditions in Canadian medicine—men whose moral worth and high culture commanded respect and confidence. This year, happily finds us with officers as worthy as were their predecessors. The President, Dr. Mitchell, adds to high professional attainments, those characteristics so valuable to a presiding officer, viz., an attractive personality, tact and wide experience. All the other officers will discharge their duties efficiently, so in naval parlance we can say "the ship is well manned."

The success of the coming meeting rests with the profession throughout Ontario. What is imperatively needed in every country district, as well as in every town and city, is active missionary work. The main reason for non-attendance, in probably 50 per cent. of all cases, is that the men do not give the subject any thought or are not spoken to about it. The potent remedy for this lies in the hands of the active members of the Association, viz., to speak to, invite, and try to persuade their fellow practitioners to attend. If all of those who take an active interest in these annual gatherings, would do a little missionary work, the attendance could easily be doubled. Another important feature is to have those who read papers, or take part in the discussions, as representative of the profession throughout the whole province as possible. There is quite a variety in the physical conditions of our large province and in the value and character of our health resorts, etc. These can be presented best by those practicing in the different districts.

But if physicians outside of Toronto have obligations resting upon them, those of the city have theirs too. Every effort should be made by each hospital staff to furnish as much clinical material as possible and a cordial invitation be extended to members to visit our hospitals. The

pathological specimens in our museums could be made interesting and instructive. The x-ray and lantern slides, in brief everything that can help elucidate the mysteries of morbid conditions should be utilized to the full.

The social features have their value too. How often do we find men bound together by much stronger ties of friendship, after an acquaintance formed at any of these social outings. The program for the recreations to be furnished this year, is in the hands of a very efficient committee and no doubt the outings will be both varied and enjoyable.

In conclusion, whatever can be said in favor of making the Ontario Medical Association a success, can be faithfully reiterated in regard to the coming meeting of the Canadian Medical Association at London. The President, Dr. Moorehouse, and his associates, are most efficient officers and London is one of the most attractive cities in Canada. Both meetings are worthy of the heartiest support of every member of our profession.

SOME INDICATIONS FOR THE USE OF ARSENIC AND SODIUM BENZOATE.*

BY E. KENNEDY, M.D.,
New Glasgow, Nova Scotia.

ARSENIC, one of the greatest poisons, is also one of the greatest remedies. Recent investigations by some French observers have shown that arsenic is not only present in every normal human organism, but it is absolutely necessary to the health of that organism. This statement does not mean that we are to eat arsenic for our healths, for the amount in the body, though important to the functions of nutrition is almost inappreciable, and is practically concentrated in one single organ—the thyroid gland. The result of these investigations has gone to show that the arsenic of the thyroid gland is there as a constituent part of the phosphorated substances called nucleins which form the chief part of the nuclei of cells. At the same time these arsenical nucleins contain nearly all the iodine present in the thyroid. It has also been shown that in this gland there exists one or more nucleo-proteids. They are always present in health. They are decreased or modified in certain diseased states. Iodine and arsenic enter into these combinations in the thyroid gland and the nucleo-proteids that they form are discharged into the lymphatics and make nutrition more active. They are eliminated with regularity through the hair, skin, etc. This explains the role of

*Read before N.S. Medical Association.

arsenic in skin diseases and in numerous affections of the nutritive functions. The foregoing statements of these observers are largely confirmatory of the idea long held of the power of arsenic in nutrition and its ability in all forms of disease where impaired or disordered conditions of the function of nutrition are concerned.

In my experience, without this condition arsenic is not indicated in any form of disease. If we look at the long list of diseases where this drug has been recommended in our text books we must come to the conclusion as to the correctness of this statement. True, close discrimination is often required.

In prescribing any remedy, the great point is to know when it is indicated, or, in other words, the deranged or impaired condition known as disease requiring the use of that drug or remedy. Here is the difficulty we all encounter in treating disease with drugs. A dozen or more drugs are recommended for one disease; how are we to select the proper one? Is there a characteristic or definite symptom which will enable us to select the drug and prescribe it with confidence of success? If there be in our treatment by drug medication one difficulty greater than another, I feel it here. Let me illustrate what I mean by the recital of one or two cases:

Some years ago I chanced to have under treatment about the same time two cases of pleurisy with effusion, one a young man of twenty years, well-built, medium sized and in a general way up to the time of his illness, passing as healthy. His antecedents were inclined to be tuberculous; I understand one uncle died of tuberculosis. The patient was taken ill with pain in side and ordinary symptoms of pleuritis. After trying various remedies, I was obliged to aspirate the chest in order to relieve distressing symptoms, removing about three quarts of fluid. In less than a week the pleural cavity was as full as ever. Again I aspirated, removing about the same quantity. This was repeated four or five times within six weeks, each time the amount seemingly increasing. In the meantime, potassium iodide and several other drugs had been tried, but with no effect, the case seemed to go from bad to worse. In despair I tried the use of arsenic, Fowler's solution, 5 drops every 4 hours till its physiological effect was shown on the eyes. In three days' time I again examined the chest and no fluid was found in the pleural cavity and it never returned. At the time arsenic was prescribed, the patient was pale, anæmic with marked dryness of the skin and some scaly eruptions on different parts of the body—a true picture of faulty nutrition.

A drug is like a stool; it will stand on three legs. In other words, if there are three prominent definite symptoms indicating its use we can look for results. Others may have observed different conditions leading to the use of this drug, but to me these have been guiding indications. Its well-known effect of arresting the destruction of red blood corspucles shows its usefulness in those diseases where it has been found beneficial.

My other case was that of a female about fifty years of age, stout, healthy, full-blooded, with good family history except that seven members of the family had suffered from rheumatism. The patient was also somewhat affected, though slightly. Patient had been visiting in a neighboring city when she became ill. When she arrived home, she was suffering much from distress of breathing. On examination, I found left pleural cavity filled with serum. As symptoms of great distress were present I aspirated, but in a few days the fluid had returned. With my success with arsenic in the other case fresh in my mind, I was tempted to try its effects in this case, but, acting on the theory suggested by someone, that all examples of serous inflammation are believed to be of a rheumatic character, and that sodium salicylate had a powerful influence over rheumatism I tried this remedy with the most happy results. In about ten days the fluid was all gone and never reformed. I have in several cases verified the effects of these two drugs in cases of pleuritic effusion. Arsenic would not relieve the latter case, neither would sodium salicylate the former. But where either of these drugs is indicated it will have the desired effect. I have followed the indications for the use of arsenic for other diseases, and can in confidence prescribe it when the indications suggesting its use are present, viz., anaemic condition with dryness of the skin and fine scaly eruptions on different parts of the body. These are to me some characteristic indications for its use which have led me to use it with success, in other words clear examples of faulty nutrition. Prof. Simpson, of the University of New York, gives as characteristic symptoms female suffering from dysmenorrhoea with tendency to asthma and scaly eruptions—another picture of faulty nutrition. In my experience arsenic will relieve diseases with the above indications and no others.

The other drug to which I wish to refer is sodium benzoate. This is a drug of which but little has been written in our text books, though one of our oldest remedies. But I have found it within the last few years a precious remedy in case of catarrhal diseases of the air passages, especially broncho-pneumonia. In many cases I have verified its good effect where the cough is very troublesome and the bronchi are loaded

with mucus of a tenacious character, accompanied by great weakness on the part of the patient. These cases are often of a rheumatic character, coming on in cold weather of spring and fall. To me broncho-pneumonia has been one of the most dreaded diseases. Having lost a number of cases before I began using this remedy, I was led to dread the disease, but, when indicated, have found this drug most valuable. It will not relieve every case of broncho-pneumonia, but when the cases are of a rheumatic tendency and very acid urine with very strong odor it is of value. To me these are the indications for its use. It has been used with success in catarrhal diseases of the bladder when of rheumatic character, but there must be the rheumatic tendency before it will benefit.

Recently, a case presenting a complete picture of the indications for this drug has come under my treatment. A lady, aged about fifty-five years, generally healthy, was last week seized with severe cough, fever, bronchial irritation, characterized by the expectoration of bloody mucous asthmatic. Said she did not lie down in bed for two nights. When I saw her she was suffering much with distress, loud wheezy respiration. I inquired whether she had any rheumatic pains. Said not, but she has had attacks of rheumatism on many occasions. Urine was of a dark brown character and but scanty and of very offensive odor. Said could not allow it to remain in room any length of time.

With the above indications, I prescribed Sodium Benzoate, 15 grains every 3 hours. First night she rested better, second night slept all night, but complained of having to get up too often to void urine and asked if the medicine did not cause that trouble. I replied that I thought it did and lessened the dose, which at once relieved that symptom. The bronchial condition, rheumatic diathesis, and the offensive urine with the marked weakness were the indications that led to the use of this drug.

Now, gentlemen, my object, in bringing my experience with these two drugs before you, is to elicit discussion that may lead to the Society's giving more attention to obtaining of definite symptoms for the administration of drugs. Happily, our present knowledge of a small number enables us to prescribe them with confidence. We know the indications and the work is easy. But what of the vast majority now recommended, many of which are of more commercial than therapeutic value. Our profession has made rapid strides in surgery and obstetric art. A surgeon may be called on to perform a difficult operation which may tax all his energies; the obstetrician may have a case of brow presentation or contracted pelvis, but in either case the course of procedure is clearly indicated. But the physician meets a difficult case, his knowledge of pathology and bacteriology enables him to make an accurate diagnosis,

but with the thousand and one remedies before him he is left in the wilderness without blaze and compass to guide him. His is the hardest kind of work if properly undertaken. Now I submit the advances made by our profession along the line of definite drug medication is in no way proportionate to that made in other branches of our profession.

While the number of cases requiring medical treatment with drugs is twenty to one of surgery, how often do we hear the remark made, "I have no faith in drugs." Does not this too often arise from a lack of knowledge of their action, or from their being prescribed too often without definite indications, and hence failure to obtain satisfactory results.

I make no plea for the use of drugs. I feel the fewer used the better, but when we do attempt their use, is it not our duty to obtain such a knowledge as will enable us to prescribe with confidence of success? May I suggest that at future meetings of our Society, one or two drugs be named for discussion, in order that some progress may be made along the lines indicated in this short and imperfect paper.

A VISIT TO PROFESSOR PAWLOW'S LABORATORY.

Abstract by Professor J. J. MACKENZIE, of Toronto.

IN a recent article in the *Münchener Medicinische Wochenschrift* (Bd. 49. No. 52.) Otto Cohnheim, of Heidelberg, gives a most interesting account of a visit to the laboratory of Professor Pawlow in St. Petersburg. Pawlow's work upon the physiology of digestion has recently been translated into English and his truly wonderful results will soon be accessible to English readers. Only since the translation of Pawlow's work has the western world realized the enormous advances that this Russian physiologist has made in regard to the physiology of digestion.

Pawlow is Professor of Physiology in the Military-Medical Academy of St. Petersburg, but his laboratories are in the imperial institute for experimental medicine, which was founded by the Grand Duke Alexander of Oldeburg. Dr. Cohnhein journeyed to St. Petersburg to personally see the results of the experiments and to learn the methods. The following is an abstract of his article. His animals are almost entirely dogs of large size, weighing from fifty to sixty pounds; a large gastric fistula is established and at the same time the œsophagus is opened at the neck and closed off from the stomach. The mucous membrane of the stomach is covered in the hungering animal with a thin layer of mucous with alkaline reaction; mechanical irritation of the

mucous membrane has no effect, but as soon as the animal is given meat, which, of course, does not reach the stomach but passes out of the fistulous opening in the neck, there begins in about five and a half minutes a rich secretion of gastric juice. The animals are placed in a holder during the feeding and the food which drops out of the opening in the neck is caught in a dish and is immediately picked up again and remasticated, this continuing for some fifteen or twenty minutes. It is not necessary even to allow the animal to chew the food in order to obtain the flow of gastric juice; the mere holding of the meat so that the animal can see and smell it is sufficient to stimulate the flow of the secretion in five and a half minutes. In time, however, the dog acquires the power of inhibiting the flow if he is not given the food in his mouth.

This gastric juice contains about 0.5-0.6 per cent. HCl. and is as transparent as water; it contains also pepsin, rennet and a nucleoproteid. Four of the animals are used to manufacture this juice, giving about 6-8 litres in a morning, and the juice is used not only for study, but is now sold and is prescribed for cases of achlorhydria.

Another important experiment which Parlow has performed is the formation of a so-called small stomach by the formation of a blind sac out of the fundus, which having the same nervous conditions as the main stomach, enables him to study the effects of the passage of food into the stomach upon the constitution of the secretion. Upon feeding with milk or bread or meat he finds differences in the amount and character of the secretion.

By various methods he produced an acute catarrh when he found that the secretion consisted only of an alkaline mucus. After recovery from this acute catarrh, he found a first condition of hypacidity, and then somewhat later a condition of hyperacidity, with finally a return to the normal. In some cases he got a curious condition of "irritable weakness" in which the secretion too rapidly reached the maximum but ceased too early so that at first there was too much fluid but ultimately too little for complete digestion. A very interesting observation was sometimes made where the psychical secretion, that is the secretion due to taking the food in the mouth, was perfectly normal whilst that due to introducing it into the stomach was markedly abnormal; evidently a condition due to an affection of the nervous end apparatus in the wall of the stomach. Pawlow's observations upon the pancreatic and biliary secretion are equally interesting. The pancreatic juice contains trypsin, ptyalin and steapsin, which are secreted as they are required, the character of the secretion being determined by the food that is given. In connection with the trypsin the most interesting fact is that it is not secreted

as trypsin, but as trypsinogen which is not split up into trypsin until it has come in contact with the duodenal secretion. This secretion contains a ferment which Pawlow has called enterokinase, which acts on the trypsinogen, but this is not secreted until the latter come in contact with the duodenal mucous membrane; mere mechanical stimulation of the duodenum produces a secretion which is destitute of enterokinase. There is thus produced a very exact and complicated chemical reflex.

Ptyalin appears always to exist as such in the pancreatic juice, but the fat splitting ferment must first be activated in the duodenum before it can act, and this is done by the bile constituents. These activating substances are of the nature of ferments and are destroyed by heat.

The normal stimulus for pancreatic secretion is the contact of the duodenal mucous membrane with the hydrochloric acid of the stomach.

The observations upon biliary secretion are also of the highest interest; these were conducted by the production of a special fistula in which the bile papilla and the surrounding mucous membrane of the duodenum was transplanted into the abdominal wall. He was thus able to demonstrate that there was no psychical stimulus capable of setting up the biliary secretion, that even the acid secretion of the stomach was without influence. The only substances which would stimulate bile secretion, when brought into contact with the duodenal mucosa, were peptone and fat. The reason why the fat is a stimulant is understood, but why the peptone so acts has not yet been explained.

The article contains a number of other interesting details about the results obtained in this laboratory and points out how Pawlow has been so successful in working out the problems which he has attacked; namely, by the skilful manner in which he has applied modern surgical methods to his work. His laboratory operating rooms are as carefully arranged as those of a first class hospital and the most rigorous asepsis is practised.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

The London School of Tropical Medicine announces that the "Craggs Research Prize" of £50 will be awarded in October to a past or present Student of the School who, during the current year, has made the most valuable contribution to Tropical Medicine. Full information may be obtained from the Medical Tutor at the School, Royal Albert Docks, London.

NOTES OF A CASE OF SARCOMA OF THE NOSE.*

By J. PRICE BROWN, M.D.,

ON Oct. 31, 1902, Mr. L. R. P., aged 21 years, presented himself at my office. On examination I found a large growth, which completely filled the left nasal cavity. It distended the nostril, flattening that side and producing partial frog-face. Posteriorly it filled the post-nasal cavity, pressing the soft palate downward, and rendering it rigid and immovable. The lower part of the left cheek was also protuberant and pendulous, although not diseased. The septum was pressed over to the right by the growth, so that nasal respiration was impossible. The tumor was of a pinkish color, particularly at the posterior end, and was smooth, glistening and firm. The sense of smell was entirely absent.

Physically he was well nourished and of a plethoric color. There was neither glandular enlargement nor pain; but there was very great distress, accompanied by a full bursting sensation.

As the growth had been pronounced sarcoma after microscopical examination by a competent authority two and a half years ago, and as excision by external operation was at the same time said to be the only possible method of relief and even that would be accompanied by great danger from hemorrhage; it was not without a good deal of trepidation, and thoroughly explaining the risk to the patient and friends, that I was willing to take charge of the case.

Careful examination impressed me with the fact that it was not an osteo-sarcoma; but that it had its origin in the soft parts, and that any existing affection of the bony framework would probably be in the form of absorption. The tumor, however, was so enormous, and the history so hemorrhagic, that I believed it to be inoperable by regular surgical excision.

Still my experience, from the history of the two cases I have verbally reported to-night, gave me confidence, and I was willing to attempt its removal by intranasal operative means; particularly as the patient and his immediate relatives were desirious that I should do so, after I had fully explained to them the risk.

The first attempt at treatment was on Nov. 13th, Dr. Wilson kindly assisting. The application of a solution of cocaine, followed by a 1 in 2,000 of adrenalin, rendered the anterior end of the tumor pallid. The idea was to remove several segments if possible by snare. It was found, however, that although the loop would slide in between the nasal wall and the side of the tumor, the latter was so round and dense that but slight hold could be obtained, and little else but mucous membrane came away. Still the hemorrhage was so severe that the nose had to be plugged tightly at once.

*Read at the Toronto Medical Society 5th March, with presentation of case.

Several days elapsed before all the tampons could be removed, consequently, operating did not really commence until Nov. 18.

From that date until Feb. 2, when an operation under chloroform was done, of which I will speak later, I removed 12 pieces of the growth by means either of the snare or scissors; and operated upon it also 49 times with the electro-cautery. Before each cautery operation I sprayed the nasal cavity out with an alkaline solution, and then removed the sloughs occasioned by the previous operation with forceps. A large number of these I kept preserved in alcohol and here they are.

By the date mentioned, or ten weeks after commencement, the great body of the tumor had been removed. But there was still a large piece attached to the vault of the left side of the naso-pharynx and posterior end of the septum. I tried several times to get a loop upon it, but the patient could not bear my fingers behind the palate to adjust the snare.

The result was that on Feb. 2nd I decided to operate under general anæsthesia. Dr. Gullen kindly administered chloroform. A mouth gag was inserted. I passed a screw snare through the nose to the naso-pharynx with the right hand, and with the fingers of the left in the naso-pharynx adjusted it in position around the base of the tumor. Dr. Gullen then turned the screw until the hold was secure, after which the screw was tightened by degrees until the growth was cut off and drawn into the nose, where it acted as a plug, the snare separating from it. The hemorrhage was excessively severe, and the gag being still in the patient's mouth, I pressed in behind the palate a number of large wads of absorbent cotton, completely filling the cavity and retaining pressure for some time with my hand.

Quarter of an hour later, after hemorrhage had ceased, the piece was pulled out of the nasal cavity with forceps. Here it is. When fresh it weighed nearly three drams, and, as you will notice, the base was nearly as large in every direction as the diameter of the tumor itself.

Between the time of this operation under chloroform and the present date I have had 12 other electro-cautery operations upon parts of the tumor not entirely removed. These have been chiefly in the turbinal region, and there still remain portions yet to be eradicated. This bottle contains some of the fragments taken out during the latter period.

There are a number of points of interest in this case that it may be well to touch upon.

1. The attachment of the tumor. It was immensely sessile as sarcoma of the nose usually is. It had grown from the whole length of the left inferior and middle turbinal regions and the posterior part of

the vault above. The attachment extended over the upper part of the left palate bone, the body of the sphenoid, the inner surface of the internal plate of the pterygoid, and the posterior end of the vomer. The bone of the inferior turbinal had been entirely absorbed, and the greater part of the middle turbinal; also a portion of the face of the body of the sphenoid; for instead of the ordinary openings into the sphenoidal sinus, there is now a large perpendicular oval opening, which in all likelihood was made by pressure absorption.

2. Method of Operating. As I expected to do nearly the whole work by the use of the electro-cautery, I considered it best to work into the body of the tumor first. By this means no injury would accrue to sound mucous membrane. In each operation, under cocaine anæsthesia, I cut as deeply and widely with the electro-cautery knife as safety would permit. On the following day, or at most with an interval of two days, the parts would be cleansed, the sloughs removed, and the operation repeated. After getting out a portion in this way and making a good hole into the tumor, I would remove successively pieces of the shell that was left. This would be done either by snare, scissors or electro-cautery as seemed best. After that a deeper portion of the tumor would be attacked in a similar manner, and so on until the great bulk had been removed.

In operating I have taken care never to injure sound mucous membrane. Very rarely have I used the cautery from the outside wall of the tumor; and when I have, the blade was passed between the true mucous membrane and the growth and the latter pressed away from the former before the heat was turned on.

A word about hemorrhage and the use of adrenalin. In the deeper or central parts of the neoplasm, hemorrhage was always severe if not properly guarded against. The blood-vessels all through the body of the growth were large; and upon these, although I used it regularly, adrenalin seemed to have no controlling influence whatever. But I soon found that a wad of absorbant cotton pressed by curved forceps or cotton holder directly upon the site of hemorrhage, would arrest it very quickly; and when once arrested it would not recur.

Upon the thin shell, however, adrenalin had an excellent effect; and I frequently removed large segments of this part of the tumor practically unattended by bleeding.

One other remark I might make here. While adrenalin in ordinary nasal operations will almost completely prevent bleeding at the time, the danger of subsequent hemorrhage has always to be guarded against. In the case of this sarcoma, however, it was different. In not a single instance, although it was used in almost every treatment, did hemorrhage

occur after leaving my office. The bleeding was always during or immediately after operation. But having once ceased, it never commenced again.

On only three occasions were tampons required. After the first tentative treatment, after the removal of the post-nasal growth under chloroform, and once only after cautery operation deeply into the middle turbinal region.

One point with regard to the temperature of the cautery. The tumor was so dense that an ordinary red-heat had little effect upon it. Hence the whole of the operations were done with the cautery-knife at a white heat. On the whole they occasioned very little pain—a sense of heat being the chief thing complained of—the patient always turning up cheerfully smiling for the next seance.

The patient has regained the sense of smell, nasal respiration is restored, and he has gained eight pounds in weight.

The tumor has not yet been entirely removed; though I hope for complete eradication. He will consequently require treatment for weeks yet; and after that it will be necessary to keep him under observation for a while.

Histological examination has been made of several sections of the tumor, and I hereby append Dr. Davis' report with micro-photographs.

From the clinical history I would unhesitatingly consider the case to be one of sarcoma, leaving the special type to be discovered by the pathologist.

In closing I would make a strong plea for early intra-nasal operative treatment in sarcoma of the nose; and the treatment of all others that I would recommend would be well guarded operations with the electro-cautery. It is an instrument whose action can be perfectly controlled; and with proper light, a wide nasal speculum, and the judicious application of cocaine, aided in some instances by adrenalin, the growth can be regularly and systematically dissected out. It takes prolonged time, a great deal of patience, and numerous operations, but the end justifies the means.

The advantages of intra-nasal cautery and snare operations over the external cutting operation, lie in the fact that in the former you remove the tumor only, leaving the whole framework in its normal position, as well as a wide cavity open for constant inspection; which, with the improved methods of examination and operative treatment now in use, enable the surgeon to again attack the growth in its earliest stage should recurrence take place. There is also the valuable cosmetic effect. Internal operation does not destroy the symmetry of the face, external operation does.

I think I can claim an advantage too in the way of statistics. Bosworth, in reporting 41 cases of sarcoma of the nose collected from all sources, says that 50 per cent. are reported as cured; but he adds that this statement is very doubtful indeed, one case being reported as cured one month after operation, three at two months and another at four months, while in others successful removal is reported as a cure without any time statement whatever.

In the three cases I present to-night: The first had a clinical history of sarcoma from start to finish—the microscopical examination in Hamilton and Boston verifying this diagnosis—and has been completely cured for eight years. The second with a clinical history of sarcoma also—microscopical examination by Drs. Davis and Carveth verifying the diagnosis—has been cured for nine months. This last one was diagnosed as sarcoma two and a half years ago by several throat specialists, one of them demonstrating the fact by microscopical examination. The clinical history has throughout been that of sarcoma, yet within the last three months it has been removed almost entirely by similar methods to the other two, completely relieving the patient of all the distressing symptoms.

When such men as Mayo-Collier, Bark, Stuart Low, and MacIntyre claim that in severe cases affecting the vault the one justifiable operation of excision of all or part of the upper jaw should not be attempted, on account of the certainty of recurrence—it is matter of satisfaction to know that even in these cases, good can be accomplished by intranasal methods. Whether recurrence will take place or not remains to be seen.

Report of Dr. Lelia A. Davis.

The specimen examined shows a cellular growth covered with stratified squamous and cylindrical epithelium. The growth is very vascular and has undergone much myxomatous degeneration. The cells vary in size and shape. These are round, ovoid and a small number fusiform. Where myxomatous degeneration has not taken place there is but little intercellular substance. There is a considerable infiltration of small round cells, especially near the surface which are apparently inflammatory in nature. There are mast cells to be seen in different parts of the specimen. karyokinesis is not very noticeable.

The vessel walls are fairly well developed. The endothelium of the vessels shows considerable proliferation.

There is no gland epithelium to be seen.

The use of the cautery has probably set up an inflammatory action which has altered the histological appearance of the tumor and which makes it more difficult to decide upon the nature of the growth. From mere microscopic examination, I am inclined to regard it as sarcomatous.

Note.—So far as can be seen, the balance of the tumor has been removed, the patient has gained 16 pounds in weight, and has returned to his regular employment. The operative treatment lasted two months.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. Mackenzie, B.A., M.B.

RULES FOR THE USE OF THE X-RAY.

In the *American Electro-Therapeutic and X-Ray Era*, Barnum of Los Angeles, gives the following for the guidance in technique in the therapeutic use ot the x-ray:

1. Seldom, if ever, is a dermatitis necessary. The effect of the ray is a tissue change which occurs without reference to inflammation of the overlying skin.

2. After an x-ray tan appears there is little or no danger of a dermatitis, even from excessive exposures. An x-ray tan should be secured in cases where deep tissue effects are desired.

3. The less the number of exposures to secure the reaction (*rayism*) without danger to the other parts, the better. By *rayism* I mean the profound effect of repeated rayings,—not necessarily an acute inflammation.

4. Idiosyncrasy to the ray is very great. Conservatism is essential until the personal peculiarity is well known,

5. In primary lesions it is best to secure *rayism* as speedily as possible, consistent with safety to the surrounding parts.

6. Secondary or recurring lesions of malignant nature are much more stubborn to treatment than primary, and should be rayed much more forcefully.

7. Varying obliquity in direction of the ray as focused on the lesion is desirable, and should be especially used where the ray would enter the cranial cavity.

8. The cumulative effect of the ray is very marked, and may be noticed several months after treatment has ceased. This is especially so in cases where the treatment was with high tubes for *rayism* on deep tissues.

9. In strictly superficial epitheliomata a comparatively low tube is best,—one by which good definition of bones of hand is had at two feet distance.

10. Use a varying high tube for all indurated spots of any size. Penetrability of the ray must increase in geometrical progression with the thickness of the diseased tissue.

11. Distance of tube from object should vary,—perhaps between seven inches and twenty inches.

12. To cause hyperaemia and induce granulation use a medium high tube at considerable distance, excited either by a static machine or coil.

13. After a severe reaction from the ray resulting in broken down tissue, give the spot a good, long rest before attempting to use the ray for healing purposes.

14. Conservatism is desirable in every case only to the point of knowing particular features to be avoided. Be sure you know your tube and patient and then *hit hard*. Break down all the affected tissue during the very first series of treatments.

15. In treating typical epitheliomas break down the induration completely so that all involved tissue may be discharged through the ulcer. Avoid too rapid absorption of breaking down diseased tissue. Get an open ulcer over a malignant growth if at all possible,—using plaster or knife if necessary.

OBSTRUCTION BY INGESTED HAIR.

The Kansas City *Medical Record* for February contains the report of a case by Dr. Main in which on laparotomy, performed on a diagnosis of incomplete intestinal obstruction, a large ball of hair intermingled with faecal matter, in all four or five inches long, was found in the small intestine. The patient was a child aged eight years, who had an inconquerable "penchant" for chewing and swallowing her own hair.

CASE OF RUPTURED UTERUS.

The Maryland *Medical Journal* of February has a report of a case of rupture of the uterus successfully treated by Winslow, of Baltimore. The patient was a multipara, fifth child, with a difficult delivery, effected by version. A tear was found, six inches in length, extending from the left corner to the ring of Bandl and then transversely across to the right side. A laparotomy was performed and the tear sutured with three rows of sutures, the first including the whole thickness of the uterine wall, the second the muscular and peritoneal coats, and the third the peritoneal and a portion of the muscular coats. The peritoneal cavity was cleansed of blood and a gauze drain inserted. With the exception of a wound abscess, the patient made a continuous and successful recovery. She has since become pregnant, but aborted after the third month.

ANÆMIA DUE TO UNCINARIASIS.

In the *Brooklyn Medical Journal*, February, Stiles, the Zoologist to the U. S. Public Health service, describes an anæmia which is very common in the Southern States, especially in Georgia and Alabama caused by the uncinaria americana, a variety of hook-worm. Though

very common in that region it is unknown here, but on account of the possibility of transferred cases, a description of the symptoms may be of interest.

The cause then is a parasitic worm which attaches itself to the wall of the small intestine and produces anæmia, partly by the amount of blood extracted, partly by the continued bleeding from the wounds left, by the production of a toxic substance, by the thickening and consequent loss of function of the mucous membrane and by the diseases that readily obtain a foothold in the intestine owing to the conditions produced by the parasite. The diagnosis is made by discovery of the eggs in the stools on microscopic examination. The succeeding stages in its life are passed, not in an intermediary host but externally, and when it reaches the infecting stage it is ingested with food or water. This fact explains its frequency of occurrence in sandy districts, for there it very readily becomes attached to particles of dust which contaminate food. Prevention is effected by (1) proper disposal of fæces, (2) treatment of all cases of uncinariasis to decrease chances of infection, (3) drinking pure water, (4) keeping hands and nails clean. The symptoms are a progressible anæmia, cardiac disturbances, increased pulse rate without temperature as a rule, œdema, emaciation, loss of power, stunted growth in children, abnormal appetite, etc. Death is usually a result of some other infection, typhoid, pneumonia, etc., in the enfeebled condition. The treatment is thymol or male fern with purgation and then symptomatic treatment.

PUERPURAL PSOITIS.

In the *Brooklyn Medical Journal*, for February, A. M. Judd reports a case of this rather rare condition. The labor was difficult from the smallness of the internal conjugate, and a not extensive laceration of the perineum and cervix was occasioned. This was repaired and the patient made good progress until the fifth day, when the temperature became elevated, with pain in the right loin. The condition persisted, deep induration appeared, and the patient began to flex the right thigh and leg. The leucocyte count at this time was 15,800. The condition went on for two weeks longer when exploration with the syringe showed the presence of pus in the indurated area, and the abscess was opened and the contents evacuated. The patient made a good recovery.

The condition is rare, two cases being reported in the Annals of Surgery, 1899, and the description of an autopsy on one at the Hotel Dieu at Marseilles, in which the whole sheath of the psoas formed the wall of an abscess cavity.

TUBERCULOSIS IN CLEVELAND.

The Cleveland Medical Journal for February contains a report of a committee appointed by the Ohio Society for the Prevention of Tuberculosis, and as the conditions obtaining there are somewhat similar to those in our own cities, the findings are of interest. As to the frequency, site and course of the tuberculosis process an analysis of the autopsy reports is the basis of the following conclusions:—

1. A total of 35.3 per cent. or ⅓ of all autopsies show tuberculous change, and this is a very conservative estimate.

2. Active tuberculous processes were found in practically half of all cases showing definite tuberculosis.

3. In over half of these active cases tuberculosis was the cause of death.

4. Under 20 years of age active tuberculosis is almost always fatal. After this age the mortality of active tuberculosis steadily decreases, so that death from tuberculosis is comparatively rare in persons over 60 years of age.

5. The relative frequency of tuberculosis in a few of the principal organs is in the order named, lungs, bronchial glands, spleen, intestines kidney, liver and nervous system. The other portions of the body are comparatively rarely affected.

6. The primary focus seemed almost invariably the lungs and occasionally the bronchial glands.

A study of the death reports for the six years from 1895 to 1901 gives the following results:—

1. Tuberculosis in Cleveland furnished, during the seven years under consideration, 8.7 per cent. of the total deaths, 1.4 per cent. of the deaths between the ages of 20 and 25 years, and 2.6 per cent. of the deaths between the ages of 20 and 30 years. The mortality was 130 to each 100,000 of the estimated average population.

2. Fifteen and one-half per cent. of all tuberculous deaths occur between the years 20 and 25, 30.3 per cent. between 20 and 30, and 50 per cent. between 23½ and 44 years.

3. Four and nine-tenths per cent. of all deaths were male deaths from tuberculosis. Fifty-six and six-tenths of all deaths from tuberculosis were male deaths.

4. Three and eight-tenths per cent. of all deaths were female deaths from tuberculosis. Forty three and four-tenths of all deaths from tuberculosis were female deaths.

5. In proportion to the total, the greatest number of male deaths is found between the ages of 25 and 29, of females between 20 and 24.

6. In proportion to the living population the greatest number of deaths occurs between 55 and 64 years.

7. The effect of the conjugal relation upon death from tuberculosis is a problem of extreme difficulty and is not determined from statistics.

The distribution of the disease in the various parts of the city was made the subject of study.

I. Certain districts of this city show a mortality from tuberculous disease much above others.

II. These districts are (1) old portions of the city; (2) in or near manufacturing or railroad districts; (3) those occupied by our laboring classes.

We believe this to be due to (1) the unsanitary conditions in which these people work and live; (2) to their ignorance of and indifference to minor ailments, and especially their ignorance of the causes and early signs of tuberculosis.

As to racial predisposition and the effect of emigration, it was found by comparing death rates with those in the countries of which the emigrants were native, that the Hungarian seemed to profit most and the Irish least by the change to a western climate.

"HOPOGAN" AND "EKTOGAN."

In *Le Pragrès Medical*, Jan. 10th, M. Frenkel discusses two new chemical substances belonging to the class "peroxides"—peroxide of magnesium, known as hopogan and peroxide of zinc called ektogan—which offer an opportunity for the therapeutic application of nascent oxygen. When brought into contact with a weak acid the chemical reaction for either is as follows:

$Mg.\ (Zn)\ O_3 + HCl. - Mg.\ (Zn)\ Cl_2 + H_2\ O.\ O.$, forming a neutral salt and an oxygenated water. In this $H_2\ O.O.$ the single atom of oxygen possesses a decided activity, due to its thermo-chemical relations.

The peroxide of zinc is suitable for use externally, and offers an opportunity for the direct application of a nascent oxygen in a known quantity with active bactericidal and curative qualities. The peroxide of magnesium, under the influence of the acid of the gastric juice, liberates a definite amount of oxygen, which exercises a local curative effect, but which, by reason of an absorption, increased on account of its condition, produces, it is claimed, other and more important results. Experimentation along this line is needed before the claims of its advocates are established.

PUERPERAL ECLAMPSIA.

Dr. R. Abrahams read a paper before the New York State Medical Association a short time ago, and which was published in the *Medical News* on the treatment of puerperal eclampsia. He described a number of cases in which he had resorted to venesection, abstracting about twenty ounces of blood, and then giving a copious enema of normal saline; several quarts are thrown high up the colon. By these means the most gratifying results followed in all cases. The cyanosis disappears, the pulse becomes soft, the patient perspires, the coma passes off, and she passes urine freely. The rationale of the treatment is that the removal of a large amount of blood rids the system of much poisonous products, while the saline solution dilutes what is left.

CANCER OF THE BREAST.

In *The Lancet* of recent date there appears a report of the Royal Medical and Chirurgical Society. Mr. Thomas Bryant reported 46 cases of cancer of the breast on which he had operated and in which the patients had survived the operation from 5 to 32 years. He did not think that three years' freedom from recurrence a long enough period to declare the patient cured. Of his cases some had died after five years or more of some other affection, and others were alive and well 20 years after operation. In 19 cases there was recurrence in the seat of the primary operation. In some of these cases a second operation was performed, the patients remaining well for periods varying from 4 to 10 years. In 10 of his cases recurrence took place in the other breast or in some other part of the body. He removed the entire breast and fat and intigument over the diseased area. The axilla is opened and diseased glands and tissue cleared out. Everything is removed down to the pectoral muscles, but these are not removed unless clearly involved. Operations for cancer of the breast, if performed early, were much more satisfactory than was generally believed. Sir William Banks stated that of 90 or 100, only one died as the result of the operation. He held that three years was too soon to pronounce a case cured. Of 58 cases which he had been able to follow up, 6 had died of local recurrence in 5 to 14 years. In 12 cases there had been general, but not local, return in from 5 to 14 years. In 12 cases the patients lived from 5 to 18 years and died of some other disease. In 14 cases they were still alive and well after 5 to 23 years. He thought that the disease usually returned in the lymphatics round the scar, and stated that the skin over the diseased area should be removed freely. Halstead's operation was wholly unnecessary. If the cervical glands were involved the case was beyond

the range of surgery, and if they were not diseased, their removal was both dangerous and uncalled for. In this opinion Mr. Bryant concurred. It was possible to do all that surgery could do by more moderate means.

ALBUMINOUS EXPECTORATION FOLLOWING THORACENTESIS.

In the Johns Hopkins Hospital Bulletin, January, 1903, there is a report of a case in Professor Osler's clinic, in which after the third operation in a case of pleuritic effusion, expectoration of serous fluid appeared. On this occasion 3100 c.c. of fluid had been slowly withdrawn, and toward the close of the operation the patient began to complain of slight shortness of breath and of a smothering sensation. After about half an hour there began a series of severe paroxysms of coughing, each being followed by profuse expectoration of serous, frothy sputum. The paroxysms followed each other at very short intervals, and the patient complained much of dyspnœa. After lasting about one hour the symptoms gradually subsided, but the patient continued to expectorate for two or three hours longer.

The total amount of expectoration amounted to about one liter, and was very frothy, of a pale, green color, translucent, and on standing deposited a muddy sediment; it was albuminous, showed no tubercle bacilli, some ephithelium, a few red blood corpuscles and some polynuclear leucocytes. The subsequent history of the patient was satisfactory.

Terillon divides the cases of albuminous expectoration into three classes:

I. Mild Form—Of which the case described is an example, the amount of expectoration being about 800 grammes.

II. Severe Form—Differing from the former in the severity of the symptoms, the great collapse, the longer continuance of the condition and the greater amount of expectoration—1200 to 1500 grammes.

III. Grave Form—Onset sudden, extreme dysponœa, the fluid gushes from nose and mouth, death may rapidly ensue from asphyxia.

The onset is occasionally immediately after the tapping, but usually an hour or so elapses; the duration varies from minutes to days and the amount from 200 grams to two litres; the signs are loud bubbling rales, and fine crackles at the base. The condition is not necessarily associated with the use of suction in the removal of effusion, but it is consequent generally on the rapid withdrawal of large amounts.

The most probable explanation of the appearance of serous expectoration is acute aedema of the lung, though the exact mechanism is uncertain. Probably the increased permeability and dilatibility of the vessels consequent on prolonged compression, coupled with cardiac insufficiency, pericardial adhesions, pulmonary clots, &c., determine a ombination of causes which lead to the appearance of this discharge in some cases of effusion treated by thoracentesis.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

THE DEGENERATE TONSIL.

Pynchon (*Jour. A. M. A.*, March 21, 1903,) employs the term *degenerate* to cover all the ordinary or commonly-met chronic conditions of tonsillar disease, which classification he thinks warranted by the fact that the same treatment, total tonsillectomy, is equally applicable to all and offers the only absolute and permanent cure obtainable. He considers the plica semilunaris is simply an hypertrophy of the mucous membrane of the pillar and is an anatomic name given to a pathological condition. He views the tonsil, particularly the submerged tonsils, as the nidus for the growth and distribution of pathological organisms and their poisonous products into the system, and agrees with those who state that many grave and fatal general injections have their origin in these degenerated masses. He therefore thinks the supra tonsillar fossa should be thoroughly exposed and eradicated in order to give perfect results. Pynchon strongly insists that the best method of dissecting out caseating masses is with the electro cautery. The advantages are: (1) A practically bloodless field so that all of the diseased tissue can be cleanly removed. (2) Owing to absence of hæmorrhage no loss of the local anaesthetic. (3) By cauterization a destruction thereof should any portion of the follicular element escape the line of dissection.

RETINOSCOPY.

Wiesner (N. Y. *Med. Journal*, March 28,) in an article on the above subject shows how essential it is for the general practitioner to make some preliminary and simple tests of the refractive condition of patients' eyes who apply for relief first of all to their family physician. There is an unfortunate tendency for some physicians to direct cases to the many self-styled *refracting optician* or *optical specialist* to have their eyes examined. The *refracting optician* has no knowledge of the physiological functions of the eye; he is not prepared by study to fit or prescribe glasses and he should not be allowed to do so. The physician has knowledge of the anatomy and physiology of the eye and with patience and perseverance he may acquire enough skill to diagnosticate the refractive condition and direct his patients to an oculist where he can be skilfully and scientifically treated.

THE CHOICE OF A GENERAL ANÆSTHETIC IN THROAT, NOSE AND EAR OPERATIONS.

Thos. J. Gallaher (*Jour. A.M.A.*, March 21, 1903,) writes on this subject: In all cases requiring a prolonged narcosis such as mastoid, middle ear and certain nasal or naso-pharyngeal, ether is preferred, unless it produces too much irritation of the upper respiratory tract. Chloroform was found very satisfactory among children, while gas was not without difficulty in children from 3 to 10 years of age. Nitrous oxide in older subjects is considered excellent for short operations. Bromide of ethyl is very highly spoken of, especially for its convenience and safety. The special advantages are: (1) No special apparatus required. (2) Narcosis rapidly produced. (3) No irritation of respiratory mucous membrane. (4) Rapid regain of consciousness.

THE RECOGNITION AND PROMPT REMOVAL OF POST-NASAL ADENOIDS IN CHILDREN.

Lantenbach in the *Jour. A.M.A.* (March 28, 1903,) writes an excellent article on this topic. The frequency of occurrence is pointed out and he states that he has never found these growths in a child who seemed the picture of health. He believes adenoids are associated with a tendency to disease in various other lymphoid structures. The diagnosis may be made usually from the symptoms accompanying the disease, viz., the difficulty of breathing, mouth breathing, open lips, vacant countenance, loss of memory, stammering, poor hearing, dead flat muffled voice, cough, pinched wing and flattened bridge of the nose, flat chest, general lack of health and vitality, encuresis, indigestion and numerous nervous reflexes. To make a positive diagnosis palpation of the post-nasal space is essential, as posterior rhinoscopy is so frequently unsatisfactory in children. The growths seem to predispose their subjects to catarrh, easily taking cold in the head, hay fever, bronchitis, pneumonia, asthma and even chorea and epilepsy. Various degrees of inflammation of the middle ear are not infrequent. Treatment: Medicinal treatment is given no place in the management of these cases, but is indicated only as a preliminary to surgical measures. Electro-cauterization, which is approved of by a few, is justly condemned. He is inclined to the view that local anæsthesia is all that is necessary, but it is necessary to have the patient firmly held. The reviewer thinks the operation brutal and rarely thoroughly performed without general anæsthesia, preferably by nitrous oxide gas. The author condemns the use of curettes, since cases have been recorded where the instruments

have been broken in the naso-pharynx. No mention is made of the operator or instrument maker being to blame. The author prefers the finger nail without anæsthesia, and he sometimes repeats this procedure if necessary on the following day. There would seem to the reviewer no excuse for such cruel treatment when nitrous oxide gas can be procured. The element of shock in the operation appears to be ignored. General constitutional treatment is indicated after the operation has been performed. It is also essential that the patient be *taught continual* nasal breathing if he has previously been a confirmed mouth breather.

CORRECTION.

In the CANADA LANCET, April, 1903, page 562, read *tonsillotomy* to indicate an incision *into* the tonsil *tonsillectomy* removal of part or all of the tonsil.

PRESCRIPTION FOR LARYNGEAL PHTHISIS.

Antiseptic and stimulating vapour to laryngeal phthisis:

℞ Creosote.
Ol. Eucalyptol ..... āā ♏ X L
Pulv Talc ..... q. s.
Trit et adde.
Aq ..... ℥i
♏

SIG.—One fluid drachm to be added to a pint of water at 140° F. and the steam to be inhaled for ten minutes.

RICHARD LAKE.

THE NASAL TREATMENT OF ASTHMA.

Francis, in the *London Lancet*, Oct. 18th, 1902, records 402 cases of asthma. There was no *apparent* nasal lesion in 346 of these cases, yet of these only 8 failed to obtain relief from nasal treatment, while 6 cases were unrelieved by treatment among the 56 who had polypi or other gross nasal lesions. He comes to the following conclusions: (1) That asthma is due to reflex spasms of the bronchial tubes. (2) The irritation may originate entirely from the nose. (3) That asthma is not directly due to any mechanical obstruction of the nasal passages and is not commonly caused by any gross nasal lesion. The septum appeared to be the seat of most of the reflex causes. From this it appears that though an asthmatic patient has an apparently healthy nose, marked benefit may follow intranasal treatment, and on the contrary, too favor-

able a prognosis should not be given to asthmatics simply because they have polypi or other gross nasal lesions. Asthmatic patients are too frequently dismissed with a mixture containing pot. iodid and some antispasmodics, while an examination of the nose might suggest treatment directed to that region.

THE PROGNOSIS OF CHRONIC OTORRHOEA.

Reik (Maryland *Medical Journal*, April, 1903,) points out the fact that with proper care and thorough treatment, the cure of chronic suppurative otitis media is nothing like so hopeless a matter as many physicians seem to think. Attention is drawn to the frequency of mastoiditis, lateral sinus thrombosis, meningitis, cerebral and cerebrellar abscess and general septico-pyemia. Mention is also made to the more recent clinical observation that broncho-pneumonia and gastro-enteritis may have for their infection origin pus in the middle ear draining into the larynx and oesaphagus through the Eustachian tube even without any perforation of the drum-head. All chronic otorrhoeas should be very carefully treated by various irrigating fluids and instillations. If cholesteatoma be present or suspected, aqueous solutions are contra-indicated. Reik says 50 per cent. of all cases can be cured by such means. The remaining cases may be cured in 50 per cent. of the cases by partial or complete ossiculectomy. In the balance of the series there is probably necrosis of tympanic walls, with or without caries in the mastoid antrum, which requires the so-called radical operation or mastoid excenteration, by which the antrum, tympanic cavity and canal are all made into one continuous cavity (which may subsequently be skin-grafted). Reik thinks of such cases about 2 per cent. are incurable, but will become curable when the technique of the operation has been more perfected.

THE ABSORPTION TREATMENT OF CATARACT AND ITS EFFECTS ON THE EYE.

John W. Wright (Columbus *Med. Jour.*, March, 1903,) draws the attention of the medical profession to the frequent disastrous effects following the use of remedies used by charlatans in attempting the cure of cataract without operation. A course of this so-called "resolvent" treatment has, in the author's experience, led to a flabby condition of the cornea and a considerable liquification of the vitreous rendering an operation much more difficult and the resulting vision unsatisfactory.

PROVINCE OF QUEBEC NEWS.

Conducted by Malcolm MacKay, B.A., M.D., Montreal.

The following is a summary of the case reports read at the Montreal Medico Chirurgical Society during the past month

Drs. Bell and Keenan showed two specimens of myelo-sarcoma of the long bones. One of these occurred in a young man, and involved the upper part of the humerus. The first symptoms were noticed in September, 1902, and consisted of rheumatic pains in the shoulder, followed by swelling about the joints, and in December, after a sudden but slight exertion, the arm became useless, as a result of fracture at the neck of the humerus. A diagnosis of myelo-sarcoma was made, and the extremity was amputated at the shoulder joint with good results. The specimen, which was passed round, showed that the growth had invaded the head and upper part of the shaft, the nature of the tumour being a myelo-sarcoma of the small celled type.

The second occurred in a woman who for a year past had been complaining of more or less pain in the knee, following an injury. The knee joint was fusiform in shape and had the history and appearance of a tubercular knee, and consequently the patient was informed of the supposed condition of affairs and it was proposed to excise the joint. Fortunately, however, as the patient was going to the x-ray room to have a skiagraph taken, the slight exertion required in moving from the bed to the stretcher caused a fracture of the femur just above the condyles. This at once changed the diagnosis to that of myelo-sarcoma and the leg was amputated at the upper part of the thigh. Pathological examination confirmed the diagnosis.

Dr. Kerry reported a case of acromegaly in a patient who had originally come to him complaining of dimness of vision. Examination showed that the patient was a typical example of acromegaly, with prominent bones and 'tennis-racket' hands, and a rather heavy stupid appearance. Some time later the man went to Germany where the diagnosis was confirmed and thyroid extract prescribed. The patient improved under the treatment for several months, but lately had become gradually worse.

Dr. Shepherd related a case of intestinal obstruction, caused by an enterolith. The patient was a woman aet. 72 who, shortly after a slight fall, began to be troubled with diarrhoea, followed by vomiting of a re-

gurgitant nature. The abdomen appeared normal, with the exception of slight tenderness, but nevertheless operation was advised. On examination of the small intestine after laparotomy a mass was found, surrounded by dark coloured intestinal wall. This mass could not be pushed onwards, but slipped backwards with ease, and, on cutting down, an enterolith about one and a half inches in diameter was removed. The wound was closed in the usual way and the patient made a good recovery. Section of the mass revealed nothing of the nature of a gall stone in the centre, and consequently it was considered to be a simple enterolith. Dr. Bell mentioned a case of like nature in which the patient refused operative interference, and who after five days of suffering at length passed the mass per rectum.

Drs. Chipman and Goodall presented a specimen of unruptured tubal pregnancy. The patient was a woman aet. 34 with nothing of importance in her personal history. At 28 years of age she was delivered of an eight months child, the labour being difficult. Some four years later she had a full term child, and again in September, 1902, she had a seven week's abortion with a good recovery. She mensturated on December 15th, and was due on January 12th, but did not see anything until the 22nd, when she lost a great deal of blood, and ever since there has been a continuous small loss of blood daily. For the past three or four years she has had occasional sharp attacks of pain in the right lower quadrant of the abdomen, which have been diagnosed as resulting from appendicitis. To relieve these conditions the patient was curetted, and an anterior colporrhaphy done, then the abdomen was opened and the appendix, which contained three concretions, was removed. On examining the appendages the left tube presented an oval swelling, covered by dilated vessels, situated toward its fimbriated end. The whole tube was removed and placed in bichloride solution in the hopes that it would turn out to be a complete tubal pregnancy. On cutting it open, after it was hardened, a perfect picture of an unruptured gestation sac of about the fifth week was seen. There was no trace of haemorrhage and everything was in situ and normal. A complete pathalogical examination of the tube had not yet been made, but as as far as it had gone it showed an inflammatory condition of the lining membrane with absence of ciliated epithelium. The epithelium was swollen, and in places proliferated, but as the other tube had not been removed it was impossible to compare the condition of the two tubes. Is was the intention of Dr. Goodall to make serial sections of the foetal sac for the purpose of studying the membranes. In the discussion which followed Dr. Lapthorn Smith said that he thought Dr. Chipman would probably have another tubal

pregnancy in the tube which he left behind. He himself had become so accustomed to having this occur in similar cases that he now generally removed the other tube. Drs. Armstrong, Lockhart and Evans very decidedly disagreed with Dr. Smith's view, and gave instances of full term normal pregnancies after removal of one tube for this condition. Dr. Gardner commented on the rarity of the condition presented by Dr. Chipman, and mentioned that he had never seen a similar case where a hæmorrhage had not spoiled the fœtal membranes. In regard to Dr Smith's proposition to remove the other tube, he thought the procedure absolutely unjustifiable, and that Dr. Chipman would have been wrong had he done so in this case.

Dr. Armstrong brought before the society a living case of excision of the tongue for cancer. The growth was chiefly on the right lower surface of the tongue and floor of the right side of the mouth, but also extended a little to the left of the mid line. The operation was preceded by tracheotomy, a precaution which Dr. Armstrong considered to be of the greatest advantage in cases of this nature, both because the pharynx could be plugged during the operation, and because the after treatment of aseptic and antiseptic nature could be so perfectly carried out. In several cases in which this proceeding was omitted aspiration pneumonia with death had resulted. When the patient had become used to breathing through the tracheotomy tube, the main operation was commenced. Butlin's incision was made on each side, both linguals tied, and the tongue removed well beyond the diseased area. The glands of the neck were removed in the first part of the operation. The next patient had an old dislocation at the ankle joint which had never been reduced, and the akiagraphs gave a very good idea of the resulting deformity. This patient also had a dislocation of the proximal phalanx of the thumb from the metacarpal bone. The condition was present in both hands and had resulted from a contraction of the palmar fascia. The third patient presented by Dr. Armstrong showed the result of thyroidectomy done under local anæsthesia. A one per cent. solution of cocaine was used, infiltrating the skin along the line of incision. One half of the gland was removed with complete relief of the symptoms, namely, the dyspnœa on exertion and continual discomfort. The patient stated to those present that she felt no pain during the whole procedure.

A case report on a pregnancy complicated by ventro-fixation was read by Dr. J. J. Ross. The patient had, after frequent and numerous pregnancies, undergone the operation of ventro-fixation of the uterus on account of retroposition, essentially due to subinvolution. Subsequent to this operation she had been pregnant three times. The first resulted

in death of the foetus from prolapse of the cord, the second was fairly normal and the third was considered to be of sufficient interest to be reported. When the patient was first seen it was observed that the prominence of the abdomen was more marked than usual below the umbilicus and that it extended well into the flanks. Palpation could not define the position, and vaginal examination was almost equally unsatisfactory in locating the foetus, but there was found just behind the symphysis a discoid mass, hard and firm, which was directly continuous with the anterior lip of the external os. When the patient had been anæsthetised the hand could be passed up behind the obstruction, and the foetus was found lying in a transverse manner with its head at the brim and with the uterine wall close down upon it. Version was practically impossible; caesarian section was as yet not apparently a necessity, so that a high forceps operation was tried with success, and although the head appeared to be badly crushed, yet the child recovered remarkably well and showed no birth palsies of any kind. In discussing the origin of the mass behind the pubes, Dr. Chipman, who had been called in to assist at the operation, stated that he considered it to be physiological in the sense that it was merely the piling up of vascular and muscular tissue in the anterior uterine wall, which was so anchored down that it could not properly expand, and consequently as the posterior wall enlarged to give room for the foetus, the anterior wall piled up behind the symphysis in a normal hyperplasia with an abnormal distribution and position, due to the ventro-fixation. The subsequent history and perfect involution of the uterus, without sloughing, and with disappearance of the tumor, rendered this explanation certain.

The Quebec Legislature defeated the bill to give effect to Dr. Roddick's Registration Bill relating to the establishment of a common standard of medical qualification for the whole Dominion. Had the Quebec Legislature adopted the bill, it was hoped the other provinces would have also followed a similar course.

A HYPODERMIC PURGATIVE.

Dr. Walter E. Dixon, writing in a recent issue of *The British Medical Journal*, calls attention to the use of apocodeine as a purgative when given hypodermically It lowers the blood pressure, causes dilatation of the blood vessels, increases peristalsis, and acts as a sedative on the sympathetic nerves. The hydrochloride should be employed in doses of 30 to 40 minims of a 1 to 2 per cent. solution. This solution should be filtered, neutral, and sterile.

WINNIPEG MEDICAL NEWS.

Conducted by R. H. Richards, M.D., C.M., Winnipeg.

Winnipeg's hospital accommodation, consisting of the General, with 215 beds; St. Boniface of 200 beds, a maternity with about 40 beds, and a small private hospital, is rapidly becoming very inadequate. More than a dozen eligible cases are daily being refused admission at the General Hospital alone. This condition of affairs is due to the rapid growth of the tributary country, and the great inrush of immigration, as it is only a little over two years ago that the Winnipeg General was enlarged at a cost of nearly $90,000. A new building is under consideration, which will consolidate the present ones of the latter institution, and which, with an addition to the Nurses' Home, will involve an expenditure in the neighbourhood of $75,000. A strong appeal will be made to the Dominion Government to contribute a good share of this sum, as a very large percentage of the charity patients are foreign immigrants.

With the exception of four cases, which came in from the south, Winnipeg has been free from smallpox this winter. This is very fortunate, in view of the fact that it was quite prevalent throughout the Province last winter, and is a credit to the prompt action of the City Health Officer in isolating cases and quarantining contacts.

Manitoba Medical College has a graduating class of 22 this year. The University examinations are from May 11th to 25th. The past session has been a very satisfactory one, indeed, the attendance being the largest in the history of the College. A committee of the faculty has been appointed to select a site and arrange for the erection of a new college building.

At a recent meeting of the Winnipeg Medical Association, Dr. Chown gave a very instructive address on "The Treatment of Inflammatory Conditions of the Right Lower Quadrant of the Abdomen." It was deeply interesting to hear a surgeon of Dr. Chown's standing comment favorably on the medical treatment of a large and, of course, properly selected class of appendicitis cases. The advantages of gastric lavage were particularly dwelt on. The speaker agreed with the treatment advocated by Dr. Ochsner of Chicago, in his recently published work. The address was listened to with keen interest and considerable discussion followed.

Dr. Macdonnell gave an exhaustive case report on Lenkæmia, and Dr. Bell exhibited some of the pathologic findings, among which was an infiltration of Pyers patches, exceeding that of typhoid fever.

A peculiar case of complete lateral asyimmetrical development was shown by Dr. Beath. Considerable discussion took place as to whether it was a case of hemiatrophy or hemihypertrophy.

A woman 40 years of age, with well marked diffuse, scleroderma, was another case shown.

Winnipeg, with a population of less than 50,000, and a very sparsely settled surrounding district, has 80 medical men in active practice. This is, I believe, a larger proportion than prevails in any other city in Canada, and it is in keeping with every other factor in practise, except the tariff. It is, therefore, scarcely necessary to add that any eastern graduate or practitioner will do well to enquire carefully into the conditions there, before making Manitoba's capital his objective point.

At the last regular meeting of the Winnipeg Medical Association, held on April 3rd, Dr. Popham read a paper on the "Toxaemias of Pregnancy." The paper was a resumé of the recent theories of the etiology of eclampsia and allied conditions, and a good summing up of the latest treatment of the same. The value of thyriod gland in these cases was touched on in the discussion which followed.

At the close of the meeting, a committee was appointed to take steps to form a Provincial Anti-tuberculosis Association.

Dr. E. S. Moorehead (Trinity College, Dublin) has been ill for the past month.

A. T. Condell, B. A., M. D., C. M., (Man. Univ.). intends practicing in Regina, N.W.T.

Dr. Jas. McKenty, formerly of Gretna, is an acquisition to the profession at Winnipeg.

Dr. R. J. Cook, late House Surgeon in the Winnipeg General Hospital, has entered into partnership with Dr. Elliott, of Wolseley, N.W.T.

Dr. Gunne, of Dauphin, returned lately from a year's study in England. He obtained the diploma of M. R. C. S.

Dr. A. R. Taylor, Winnipeg, is taking a post-graduate course in Chicago.

Dr. Charles Woollard, Winnipeg, is invalided by an osteitis of the right humerus, the sequel of a bullet wound received in the late South African War.

Applications are being received for the position of Internes, or Resident Medical Assistants, as it is termed, at the Winnipeg General Hospital. There will be five or, perhaps, six graduates appointed, the term of service being one year, commencing 1st June.

MEDICAL SOCIETIES.

TORONTO MEDICAL SOCIETY.

REGULAR MEETING, MARCH 5TH, 1903.

The president, Dr. Hay, in the chair. Dr. J. D. Webster and Dr. J. McMaster were elected to membership.

Dr. Price Brown read a paper entitled "Sarcoma of the Nose." See page 631.

Discussion—Dr. Dickson said he had seen the boy, who was presented to-night, on Sept. 18th, 1900. He had been referred to him to try electrolysis. At that time the condition was that the nostril was pushed to one side, the growth coming to the front. The negative current was tried for 5 minutes, there was a great hæmorrhage, checked with supra renal gland. In all, 10 treatments were given by Dec. 1900, 8 with negative, 2 with positive needle. There was no progress and the conclusion was that this was not the best method. He would now use x-ray, as tubes can now be had with leaded glass which will concentrate the rays and which can be carried into the cavities. Dr. Bruce said that the case which had been seen in Hamilton and Boston, was probably a fibroma and not a sarcoma. It was contrary to his ideas of removal of malignant growths to remove them piece-meal. They should be removed entirely and whole. If large round, or spindle, celled there would not be such good results. Myeloid, or osteosarcomas, might give such a result as that mentioned in the paper. He related some cases of sarcoma on the face. Sarcoma grows more rapidly in the young than the old, yet one case reported to-night in a young man had extended over two years. He had seen a case of sarcoma in the throat, which so filled it that the patient could only swallow fluids. After two weeks treatment with x-rays he could swallow solids. At the end of three weeks the growth had shrivelled away, but there had been a large burn. Even with fibromata, Dr. Price Brown should be congratulated. Dr. Trow had seen the young man two years ago, and thought it undoubted sarcoma at the time. He thought that there was a great difference in the malignancy, even in the round cell forms. This must have been of the slow growing variety. He related a case in which sarcoma was undoubted, and, for which had been given a lotion of plumbi subacetat. He had not returned for a year, when the growth was much better, and six months later was apparently gone. Dr. Ferguson took exception to Dr. Bruce's statement that

sarcoma must be rapid growing. The amount of fibrous tissue in the growth would determine the rate of growth. He sited some cases of slow growth, and some that had been apparently cured. Dr. Lelia Davis read the pathological report. In reply Dr. Price Brown said that the first case reported had been called sarcoma in Hamilton and and Boston. It was sarcoma in history and, clinically, was probably a fibro sarcoma. It was 4 years in existence.

Dr. McPhedran read a paper, "Pulmonary Infarction." A man, of 55, a laborer, had been in St. Michael's with œdema of the leg; later on there developed a pain on the right side, with shortness of breath, mentally poor, alcoholic, temp. up, respiration 25, pulse 100, cough, dark bloody sputum, restless, slept badly, liver extended three inches below the ribs, consolidation on the right side, weak respiratory sounds, arteriosclerosis, heart indefinitely enlarged, systolic murmur not marked when weak, leucocytes 15,000. At the beginning, friction at the base, later on serum appeared in the pleural cavity, sputum pneumococcic, numular, adhesive at times, almost a pure blood clot. The post-mortem report showed that the right lung was seat of hæmorrhagic infarction, no area of inflammation, no pneumonia, heart large, myocardial change, atheroma in the aorta, liver very large, small foci of fibroid character seemingly syphilitic, but there was no history of such. In discussion. Dr. Rudolf said that this man was the type to have infarction. It was interesting to note that there was no emboli which was rare.

Dr. Oldright moved that a committee be appointed to memorialize the Government, endorsing the bill now before the house for the care of alcoholics. Dr. Bryans seconded the resolution which was carried.

Regular Meeting, March 20th.

This meeting was held at the Toronto Western Hospital.

Dr. Galloway showed a case of gun-shot wound which had been seen at the meeting in November last. The nerves of the arm had been injured. He had operated to secure a subsidence of the infiltration, and had found a sequestrum, which he had removed. The case was much improved and was still improving. In discussion, Dr. Hay said that the case was much improved in movement and circulation. Dr. T. S. Webster said that he had seen the case before, and that the result was good. He related a case that had resulted spontaneously in recovery. Dr. Primrose said that he had seen complete paralysis from neuritis and pressure get well spontaneously. Still, much could be done, as the case presented has shown. He related a number of cases, by way of illustration. Galvanism was useful in treating these cases, preventing

atrophy of the muscles, while expediting the recovery of the nerve. Dr. Ferguson also related a case of spontaneous recovery.

Dr. Price Brown exhibited a case of tubercular laryngitis andphthisis. The man had coughed for seven years, and had been referred to him, April, 1901, for the laryngeal trouble. He weighed then 116 lbs., the epiglottis was swollen, the vocal cords were ulcerated, rāles and bronchial breathing were bound over the chest. After two months' treatment he had improved, was heavier and temperature lower. In June, he advised him to try to get into the Sanatarium at Gravenhurst, but Dr. Powell reported him ineligible, extensive consolidation, left apex to seventh rib and right apex. He then tented out for a month, then going to Muskoka and remaining there till November. He came home and tented out all winter here. On May 20th, 1902, Drs. Powell and McDonough recommended him for Gravenhurst Sanatarium. On Nov. 8th of last year he was sent back, because the stenosis was severe in the throat and the voice was gone. He then weighed 140 lbs., the lungs being improved materially. A high tracheotomy was performed. He now weighs 136 lbs., has no abnormal temperature in the evening, the sputum had been examined that day and no bacilli found. The left lung is fibrosed, the right has almost normal expansion. The epiglotis is contracted, and the intention is to try intubation to expand the larynx. Discussion. Dr. Hunter said that the case emphasized the importance of early diagnosis, and that the larynx may be the primary seat.

Dr. Galloway showed a case of congenital dislocation of both hips, treated by the Lorenz bloodless method. The extreme abduction was not painful. The difficulty was to keep the dressings from being soiled with urine.

Dr. Ferguson showed a case where there had been an uncontrollable desire to write and talk. The case was a patient of Dr. Stenhouse. After a consultation, the conclusion was that there was an irritation over the speech and writing centre An incision was made and a large portion of bone removed. Adhesions were found between the dura and the bone, which were separated with difficulty, the result being very good. There was now little loss of control.

Dr. Beatty presented a case of sudden thrombosis of the femoral vein. The attack came on three days ago with severe pain, extending from the middle of the calf to the thigh. The man had applied massage before he had said anything about the attack. Was less tender now. Dr Bryans thought it dangerous to handle or move about such cases. Dr. Wilson related a case where death had occurred from moving. Dr. Carveth said that the condition was not uncommon in case of varicose

veins, or where the veins were enlarged. Dr. Primrose said that the condition should not be confounded with varicosed veins becoming fibrosed. He asked as to rise in temperature or tenderness, along the entire course of the vein. Dr. Ferguson thought it was not a case of phlebitis. In reply, Dr. Beatty said there had been no rise of temperature until the day of the attack. Next morning it was normal. The man said that it had not been painful, except the first day when he had rubbed it. It was impossible to keep him still.

Dr. McDonald showed a specimen of papilloma of the ovary. It was removed from a woman 70 years old. She had had three attacks of pleurisy, with three drainings. The peritoneum was studded with tubercle and the fluid was tinged with blood. Dr. Beatty also showed a papilloma removed from among the intestines which had passed through the mass. Dr. Primrose said that Dr. McDonald's specimen looked like papillomatous carcinoma and Dr. Beatty's, like papilloma or adenopapilloma. Dr. Hay said that the bleeding in Dr. Beatty's case was very severe and mentioned that the method of drainage was good, namely, through the cul-de-sac of Douglas.

Dr. Hay showed the largest solid tumor of the ovary that he had seen or read of. A fibroma of 15 years' growth, weighing 31 lbs., after dripping off the blood and liquid. It was not of uterine origin. Dr. T. S. Webster said that it was his practice not to give large doses of purgatives the night before operation. Dr. McDonald said that this was the largest tumor of the ovary on record. Some years ago he had removed one weighing 30 lbs. He did not understand why Dr. Hay had drained. Dr. W. J. Fletcher asked the condition of the other ovary and tube. Dr. Hay said he had drained because of the adhesions. The other ovary and tube were normal.

Dr. W. J. Fletcher reported the following case: On Monday, March 1st, he had been called to see Eva, aged 12, sick since Friday, on which day she had vomited, and again on Sunday. Her knees were drawn up, the abdomen retracted, pain in the lower abdomen, temp. 99.6, and pulse 90. She was so tender that he could not examine her, but thought that he could make out dullness. An enema was given without relief, and none came after another had been given. On Tuesday, Dr. Webster saw her. The face was pale, pulse rapid and weak, some rise in temperature; a ridge was seen low down, perpendicular to Poupart's ligament, running across the abdomen. Operation at 2 p.m. Drs. Todd and Carveth administered the anaesthetic. The abdomen was incised and, on opening the peritoneal cavity, dark fluid blood welled up. A large

blue mass rose to view which proved to be the spleen, enormously congested and enlarged. The appendix was normal and there was no peritonitis. The blood was sponged out. A tear of the gastrosplenic omentum was made out. As she was doing badly under the anaesthetic, the abdomen was hurriedly closed. The heart was weak during the night. She lived till the afternoon on Wednesday. Loomis and Thompson are the only authors where he had been able to find any similar case. Dr. McDonald said that in Jacobson's work a case was reported. Why had the abdomen been closed without securing the bleeding points? Dr. T. S. Webster said that vomiting had displaced the spleen, that the coils of intestine had got above it and the gas forming had forced it into the pelvis. In reply it was said that the condition of the girl, under the anaesthetic, prevented anything more being done.

Regular Meeting, April 3rd, 1903.

The president, Dr. Hay, in the chair. Dr. Wilson related the case of a child, one month old, which was said to have been healthy when born. A lump was found in the left breast, the size of a pigeon's egg, very black. The navel was still leaking and there was bleeding from the nostrils and lips. The child had convulsions and is getting weaker. He gave calcium chloride, without effect. The father's sister is said to have had a child die with bleeding from mouth and nose.

Dr Primrose related a case of a strong boy, who had a hernia, which became strangulated three weeks ago. It was operated upon by Bassini's method. The external ring was very large, and would admit two fingers. At 1 o'clock there was no abnormal temperature, the operation being completed at 2 p.m. At 4 p.m. the temperature was 103 F., at 8 104.4 F., but he looked well. Next morning it was 102 F. and became normal at night. Dr. Primrose thought the cause was influenza. He had another patient, one of simple fracture, who had grippe with a sudden rise in temperature. Dr. Wilson said these cases were interesting, and reported a case with a rectal temperature of 109 F., due to the same cause. Dr Ferguson said that the causes of rise of temperature in operation cases were: 1. Sepsis. 2. Other concurrent infections. 3. Traumatic and (4) neurosal conditions. He related a case of the fourth class. An operation, not severe, wound healed by first intention, on the fifth day excitement, not connected with the operation, caused a rise to 105 F., becoming normal the next day.

Dr. Bryans moved that the Secretary draft a suitable letter of condolence, and that a record of the same be entered in the minutes, a copy being forwarded to Mrs. Gordon, expressing the regret of the

Society at the sudden death of Dr. Gordon, one of the Past Presidents of this Society. Dr. Ferguson seconded the motion and it was carried.

Dr. Primrose moved that this Society endorse the movement to form an academy of medicine and procure a doctor's headquarters, and will rent a room to hold its meetings in, if a suitable room is provided in the building. Dr. Perfect seconded the motion and it carried unanimously.

Dr. McDonald then read a paper on abdominal and pelvic operations He chose for his subject, "Unsuccessful Operations." He dwelt fully on the great importance of recording all our failures, and our reasons for these failures. He thought an operation could not be regarded as successful to any extent unless it materially relieved or cured the patient. We cannot always cure our patients, and we should be candid with them and point out the true limits of our skill. He condemned the practice of doing operations where little or no good could come from them, and also the habit of those who had no experience of certain operations performing them. We should weigh well everything before deciding upon an operation. Look on both sides of every case. The preparation of the surgeon and the patient for every operation should be thorough. Causes of failure were often due to some carelessness in these preparations. The utmost care should be taken in the selection of assistants. If you knew any one to be careless in such matters, refuse to have him assist you. There should be no break in the technique at any point. Stress was laid on the following points as conducing to success: 1. Fix the time for the operation and rigidly adhere to it. 2 Avoid undue delay in the performance of the operation. Where it can be avoided, slow work must be condemned. 3. Avoid talking and all levity in the operating room. It is bad for both the profession and the patient. 4 Regard every case as an important one, and do your best if you wish to attain success. 5 In every case of failure, note every feature of the case, in order that you may be guided in the future by the experience thus gained.

In discussion, Dr. Primrose said that he quite agreed with the assayist, that in reporting our unsuccessful cases and mistakes much could be learned. The reason so little of this was done is the lack of system in recording cases. In regard to the assistants, the operator was responsible. The man who brings the case wants to assist. If the operator knew him to be all right he could allow him to assist; but, if not, it was not fair to the patient. He did not believe in excessive purging before operation. Calomel was good both before and after the operation; but, if there was any fear of bowel paralysis, give the calomel at night and the enema after the patient left the table. Slow operating is often detrimental to the patient, but it should not be hurried at the expense of careful work. Dr. Perfect said that some men had an operation craze. There was great necessity to weigh well all the symptoms before operating. The time had come when every surgeon felt the great responsibility in putting his hands into the abdominal cavity. No man's hands were sterile in a room of 80 degrees or over, and he should

then wear rubber gloves. Dr. Webster said that, as a routine, the patient should not be purged before operation but that the bowels should be moved just enough to be empty. Dr. Wilson said that we should study conservative surgery more than we do. With regard to technique, the surgeons were very careful of everything except the nose and mouth. Dr. Carveth said that patients were allowed to suffer too much for want of fluids after operations. He gave at once as much water as the patient asked for. He thought that surgeons were too serious about their work and took no thought for themselves. A temperature of 80 was too high, even for an operation.

THE ETIOLOGY AND TREATMENT OF HAY FEVER.

Sir Felix Semon, in *The British Medical Journal* for March 28, reviews this subject very fully, and discusses the researches of Dr. W. P. Dunbar. Dr. Dunbar has made careful analysis of the pollen from a great variety of grasses, and has isolated three bodies: (1) The true toxic substance, (2) a starchy matter, and (3) the ethereal oils. It is the first which causes the inflammation and irritation of the mucous membranes of the nasal cavities and the eyes. It is a white powder, with proteid reactions. When applied to these mucous membranes, it causes dedema, irritation, inflammation, and a copious discharge. The pollen of roses, limes, wormwood, and other plants was found to be inactive. This toxic proteid has been injected into the circulation of rabbits, goats and horses, with the view of obtaining an antitoxic serum. The experiments have been very satisfactory so far. The use of the antitoxic serum speedily controls the subjective and objective symptoms, produced by the application of the toxic powder, or proteid. If the toxic and the antitoxic bodies are mixed, and then applied to the nasal, or ocular, mucous membrane, no irritation results. They neutralize each other. The toxin is obtained by crushing maize pollen with saline solution, and precipitating the toxin with alcohol. The antitoxin is obtained by injecting horses with this extract. Some are not affected by the toxic solution, and are immune to hay fever. Equal parts of a 1—500 toxic solution and serum are neutral.

SALICYLATE OF QUININE.

Sir John W. Moore, in the *Practitioner* (*British*) for January, has some interesting notes on the above drug. It is of distinct value in rheumatism, and may be given in 5-grain doses thrice daily. It is not depressant like the sodium salicylate. In influenza it is very useful, in 3 to 5-grain doses. In pneumonic fever it is a good tonic and alterative, and improves the general state of the patient. It is far ahead of all other disinfectants in enteric fever. When commenced early in the disease it regulates the bowels, corrects the fetor of the evacuations, checks tympanites, and controls the tendency to vesical catarrh. In chlorosis due to auto-intoxication, the result of constipation, it is of much service. It has proven useful in the fever of scarlatina, measles, and erysipelas. It relieves the pain in herpes zoster affecting any of the nerves, especially those of the neck and face.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF TORONTO FINANCES.

The subscriptions to the Convocation Hall fund for the University of Toronto now amount to $34,399.10. Several of their former subscribers have added to their original donations.

The expenditure and revenues of the University of Toronto were last year divided among the different departments as follows:—

	Revenue.	Expenditure.
Arts	$149,089.28	$158,650.56
Medicine	37,094.21	37,004.21
Applied Science	35,422.13	35,422.13

The report of the work of Toronto University and affiliated colleges for the academic year of 1901 and 1902 has been presented to the Lieutenant-Governor. The faculty numbered 70 in arts, 56 in medicine and 20 in applied science. There were 432 students in the arts course in University College and 224 at Victoria. The total number of students was 1,646 and there were 1,885 candidates examined. Honorary L.L.D.'s degrees were conferred 14 times, and 130 B.A.'s were granted. The M.A.'s numbered 24, M.B.'s 55, D.D.S.'s 30 and Ph.B.'s 51. The total degrees numbered 350.

QUEEN'S GRADUATES IN MEDICINE.

The following are the results of the recent examinations in medicine in Queen's University, Kingston. Forty candidates obtained the degrees, M. D., C. M.

House surgeons, W. S. Murphy, Portland; A. H. Leonard, Kingston; J. H. Laidlaw, B. A., Georgetown; F. M. Bell, Kingston; G. H. Ward, Napanee.

Medal in surgery A. H. Leonard, Kingston; medal in medicine, W. S. Murphy, Portland. Dean Fowler scholarship, W. Gibson, Amherst Island. Dr. McCabe's prize, junior pathology, A. H. Singleton, Newboro; Dr. Hayunga's prize in materia medica, therapeutics and pharmacy, A. H. Spooner, B. A., Latimer; Faculty prize for best examination in anatomy, physiology, and chemistry, A. C. Spooner, B. A., Latimer, and H. A. Boyce, Murray.

M. D., C. M., S. W. Arthur, B. A., Inverary; W. H. Aykroyd, Railton; F. M. Bell, Kingston; J. H. Cryan Demorestville; J. S. Dickey, North Williamsburg; F. J. Ellis, Ellisville; T. B. Faley, Charlottetown,

P. E. I.; H. A. Gibson, Kingston; D. H. Houston, Belleville; O. A. Igoe, Tarrytown, N. Y.; W. J. Knox, Beechburg; J. H. Laidlaw, B. A., Georgetown; A. H. Leonard, Kingston; R. H. McKerras, Kingston; A. E. MacMillan, Sydenham; H. M. Moore, Athens; W. S. Murphy, B. A., Portland; L. E. Mylks, Kingston; A. McCabe, Gloucester, Mass.; J. E McCambridge, Kingston; D. M. McCarthy, Kingston; J. J. McDonnell, St. Andrew's West; J. L. McDowall, Kingston; C. G. McGreer, B. A., Napanee; W. W. McKinley, Seeley's Bay; W. L. Pannell, Kingston; J. A. Pritchard, Brockville; G. M. Reid, Kingston; J. J. Robertson, Montreal; E. Sheffield, Peterborough; W. T. Shiriff, Fitzroy Harbor; A. A. Staley, Wolfe Island; G. H. Ward, Napanee; J. A. Wellwood, Fordyce; W. Workman, Kingston; G. E. McIntosh, Kingston; B. Haskin, Green Bush; C. A. Symmes, Aylmer, Que.; F. A. Aylesworth, Bath.

The Chancellor's prize of $70 was won by A. H. Leonard, Kingston, but, as he was given a house surgeoncy, he had to forego the prize, which went to G. H. Ward of Napanee.

GIFT TO DALHOUSIE COLLEGE.

Mr. Frederic Nicholls, of Toronto, who was in Halifax for several days recently, visited Dalhousie College and was so well pleased with the work of that institution that he donated a quantity of valuable electrical apparatus for use in the chemical and physical laboratories, including a motor generator set and a switch-board for the same. It is to be hoped that many wealthy persons will copy from Mr. Nicholls. There is abundance of wealth. All that is lacking is the disposition to give; but this will come. In no way can wealth be so profitably used as in the aid of the sciences and medicine. Preventive medicine is saving the lives of thousands of useful citizens, and lengthening the lives of all.

MEDICAL UNIVERSITIES AND COLLEGES.

There are in the Dominion of Canada nine universities which confer degrees in medicine. The University of Toronto and Trinity University, in Toronto; Western University, London; Queen's University, Kingston; University of Manitoba, Winnipeg; McGill University, Laval University, and Bishops University, Montreal, and Dalhousie University, Halifax. There are, in all, ten medical colleges. Three in Toronto: the Medical Faculty of the University of Toronto, Trinity Medical College, and the Ontario Medical College for Women. In London there is one in connection with the Western University. Winnipeg has one in affiliation with the University of Manitoba. The Medical College in Kingston is connected with Queen's University. There are three medical colleges

in Montreal associated with the three universities, McGill, Laval and Bishops. The Halifax Medical College is in connection with Dalhousie University. The total number of students, regular and occasional, are in the neighborhood of 2,000. There are about 376 professors, lecturers and demonstrators engaged in teaching in the ten Canadian medical colleges. The annual income is approximately $100 for each student, or a total of some $200,000 for the ten colleges.

MEDICAL GRADUATES HONOR DR. J. H. RICHARDSON.

Dr. Richardson's old pupils gave him a banquet on 15th April, and on that occasion presented the Medical College of the University of Toronto with an oil portrait. The function was a most enjoyable one. The following address was presented to Dr. Richardson :

We, your old students, have been desirous of expressing in some suitable way our respect for you as a teacher and our appreciation for you as a friend, a respect and affection which you inspired in us as undergraduates, and which the experience of later years has only served to increase. To fulfill this purpose, we have thought that we could do no better than to present your portrait to the University with which, from its earliest years you have been so closely identified, whose cause you have so loyally defended and whose reputation you have so signally advanced. For nearly half a century you have labored in the cause of medical education with unwearied patience and with ungrudging devotion. We wish to assure you that your labor has not been in vain. To the foundations laid by you and by your colleagues of the Toronto School of Medicine, the University of Toronto owes, in no small measure, the success of her Medical Faculty ; and we, your scholars, owe to you, our master, for sound teaching and kindly help, for high ideals and a worthy example, a debt which we can never repay, but which we are proud to acknowledge. We feel, therefore, that the building which is about to become the home of the medical Faculty of the University of Toronto could have no fitter ornament to decorate its walls than the portrait of one who has so many claims as yourself upon the grateful remembrance of every graduate. It is our great privilege, in making the offering, to have the opportunity of testifying at the same time our loyalty to our Alma Mater and our love for her distinguished son. We beg to sign ourselves, in behalf of the subscribers, your grateful pupils and faithful friends. Toronto 15th April, 1903. I. H. Cameron, Joseph Bascom, William oldright, W. H. Ellis, A. H. Wright, J. F. W. Ross, J. Milton Cotton, H. Wilberforce Aikins, J. T. Duncan, G. S. Cleland, G. A. Peters, John Caven, E. E. King, J. A. Amyot.

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EDITORIAL.

TORONTO MEDICAL HEADQUARTERS.

For some time past, efforts have been made with the view of procuring a suitable site and building for the medical profession of Toronto and medical men visiting the city, Up to the present time, there is no building owned, or controlled by the medical men of Toronto. The various medical societies of the city now meet in different places, and are paying rent for very unsuitable accommodation.

It has been urged that the Toronto Pathological Society, the Toronto Clinical Society and the Toronto Medical Society should unite their forces and form an Academy of Medicine. Some arrangement could easily be effected so that a common fee would admit to the various sections. These societies could obtain suitable rooms for their meetings in the building to be secured by the profession.

Such a building would also afford a proper home for the library, which is now becoming one of no mean importance. At present, the library is housed in the Ontario Medical Council buildings; but it has been decided by the Medical Council that it must be removed, as the Council requires the rooms now used for the library. This is an additional reason why some building should be secured by the profession, and subject to its control.

Further, it would be a most laudable object for the profession to support. There is nothing so much needed as a doctor's club, or headquarters, where they could meet in a social way, and to which they could take a visiting practitioner. There is no doubt but that such a doctor's headquarters would be of the utmost service in Toronto in the development of good fellowship, and the formation of a true *esprit de corps*.

It is a matter for much congratulation that there is reason to believe the efforts in this direction are going to be crowned with success. A number of handsome subscriptions have already been secured. Those who have the matter in hand feel sanguine of procuring the requisite amount of money at an early date, and that the work of erecting, or re-modelling a building will soon be gone on with.

There never was a more worthy object before the medical profession of Toronto, and, through it, before the whole profession of Ontario. We hope the response will be prompt and generous. There is not a practitioner in Toronto who cannot do something. For the sake of the library, many throughout the Province, it is hoped, will also be found willing to assist. Let all unite in saying of this laudable movement, *felix faustumque sit.*

LADY MINTO, THE VICTORIAN NURSES, AND COTTAGE HOSPITALS.

When her Excellency, the Countess of Aberdeen, started the movement for the establishment of the Victorian Order of Nurses, there were not a few who looked rather coldly upon these efforts. Even among the medical profession, there were many who regarded such an order of nurses as quite unnecessary. Time has shown that these nurses have rendered valuable services to the poorer members of the community, and have been of the utmost service to the medical profession in a great variety of cases where it would have been impossible, otherwise, to have secured competent nursing.

It is a matter for much congratulation that her Excellency, the Countess of Minto, has seen her way clear to follow up the work inaugurated by her predecessor. We wish her every success in these laudable efforts. But a matter of even greater moment than this aid to the Victorian Order of Nurses is the efforts of her Excellency to establish the Lady Minto cottage hospitals in remote parts of the country, where such hospitals will be of the greatest possible utility. Eleven of these are now in existence. It is hoped to secure sufficient funds to realize an income of $5,000 a year. This is surely a modest request, and one which we would be disposed to regard as too small. A number of cottage hospitals in remote parts of the country will prove to be one of the most useful of our national assets. They will be of the greatest service in the relief of suffering and in the saving of life.

The Countess of Minto is taking the same interest in this matter that his Majesty, the King, is taking in Britain. We know what excellent results have attended the efforts of the King in raising a general hospital fund, and in the procuring of aid for the treatment of tuberculosis, Her Excellency could be engaged in no nobler work, and we can say truly *misiris succurrere adest.*

REGULATIONS CONCERNING SCARLET FEVER AND DIPHTHERIA.

At a recent meeting of a committee of the Toronto Council, Ald. Dr. Harrison brought up a matter of considerable interest in view of the prevalence of scarlet fever. He moved, "that the committee place on record their protest against the regulations adopted by the Provincial Board of Health, on February 12th last, and made an Order-in-Council March 5th, whereby anyone suffering from scarlet fever was ordered to be placed in the isolation hospital or tent, giving neither the physician in charge nor the medical health office any option as to the effectiveness of the isolation of the case at the house, nor of the safety or the danger with which the patient might be moved, and which, in our Canadian winters, and with the disease, would under certain conditions be extremely dangerous to life."

On the 13th of February, the Provincial Board of Health adopted certain regulations regarding the above diseases. These regulations were made an Order-in-Council, March 5th, and consequently became law.

With regard to diphtheria, the most important regulation is No. 4, which reads as follows:—"On the occurrence of the first, or any case of diphtheria in a municipality, *the Medical Health Officer at once shall place the person attacked in the isolation hospital, tent, or other place provided under section 106, Cap. 248, R.S.O., 1897*, and shall take proper measures for *placarding houses*, for the disinfection of personal clothing, and, if necessary, the destruction of clothing which may have been exposed to the contagion, and for the disinfection and purification of every house, conveyance, rail-car, steamboat, sailing vessel, carriage, or other vehicle which may have been exposed to the contagion."

In the matter of scarlet fever, the important clause is No. 5 of the regulations. It reads as follows: "On the occurrence of the first, or any case of scarlet fever in the municipality, *the Medical Health Officer shall at once place the person attacked in the isolation hospital, tent, or other place provided under the Act*, and shall take proper measures for the disinfection, or, if necessary, the destruction of all clothing which may have been exposed to the contagion, and for the disinfection and purification of every house, conveyance, rail-car, steamboat, sailing vessel, carriage, or other vehicle which may have been exposed to the contagion."

It will be noticed that there are a few verbal differences in the above two quotations from these regulations. In the regulation regarding scarlet fever, no mention is made of placarding houses, nor is the section

and chapter of the statutes quoted, as authority for the said regulation pertaining to isolation. If the Act does not authorize placarding, then it could not legally be done under the above regulation in the case of scarlet fever. We ask special attention to the words in italics. Do they mean compulsory isolation in every case in a "*hospital, tent, or other place provided under the Act?*" What is the meaning of the words "*other place provided under the Act?*" Do they mean treatment at the house of the patient under proper safeguards?

The portions of the Act governing this matter are sections 106 and 107, of chapter 248, R.S.O. 1897, and reads as follows: In case the smallpox or any other disease dangerous to the public health breaks out in any municipality, the health officers or local board of health, in case the municipality has not already provided the same, shall immediately provide such a temporary hospital, hospital-tent, or other place or places of reception for the sick and infected as they judge best for their accommodation and the safety of the inhabitants, at the cost of the municipality, and for that purpose may:

(1) Themselves erect such hospital-tents, hospitals, or places of reception, or

(2) Contract for the use of any such hospital or part of a hospital, or place of reception; or

(3) Enter into any agreement with any person having the management of any hospital for the reception of the sick inhabitants of their district, on payment of such annual or other sum as may be agreed on; or

(4) Two or more local boards of health may combine in providing a common hospital, R.S.O. 1887, c. 205, s. 97, 107. Such hospital or place of reception shall be subject to such regulations as may be made by the health officers or local boards of health. R.S.O. 1887, c. 205, s. 98.

From the above quotations from the Act it is quite clear that the recent regulations are general in character, and that the local boards of health have full power to make regulations for their own guidance, such as placarding, isolation, or the permission for a patient to remain at home under proper safeguards, such house being regarded as the *other place provided under the Act.* We are disposed to regard the recent regulations as both timely and efficient.

ANTI-VACCINATION EFFORTS.

The attempt to make the law governing the all important practice of vaccination effective in the fullest sense is likely to be met by considerable opposition from the anti-vaccinationists. It does seem strange

that some people will shut their eyes against the most convincing evidence in favor of the great value of vaccination as a preventive of smallpox. Recently there have been two meetings of the anti-vaccinationists, at which a certain doctor said that there was an increase in consumption and cancer, and put this down to vaccination. He contended that vaccination was no preventive of smallpox. Another doctor condemned vaccination in unmeasured terms, and claimed that it increased the death rate. A number of laymen spoke against vaccination.

This is a sample of the manner by which ignorance is kept alive and prejudice fed. These anti-vaccinationists are fond of referring to the "Leicester system." In Leicester the anti-vaccinationist sentiment is strong, and a system of quarantining every one who has been exposed, for a period of ten or twelve days, is the custom. This is far more expensive and irksome than vaccination. But it must be borne in mind that even in Leicester the attendants upon smallpox cases are protected by vaccination, thereby giving their case away.

In proof of the value of vaccination we may give the following statistics of cases of smallpox:

	Cases.	Deaths.
Vaccinated with good marks	2,085	62
Vaccinated with imperfect marks	4,854	455
Said to have been vaccinated but no marks	1,295	352
Not vaccinated	2,174	938

One would think the above would be quite convincing.

In 1800, the death rate from smallpox per million of the population in Great Britain was over 2,000. In 1835, due to vaccination, it had fallen to 830; while in 1892, due to more effective vaccination, the death rate was 73 per million.

But take another group of figures. In a number of British cities over a period of years, it is found that for ages under 10 years there were 351 cases, with 12 deaths, or 1.4 per cent. among the vaccinated. Among the unvaccinated there were 1,783 cases with 636 deaths, or 35.6 per cent. Of ages over 10 years, there were among the vaccinated persons 10,259 cases with 518 deaths, or 5 per cent. Among the unvaccinated there were 1,057 cases, with 384 deaths, or 36.3 per cent. It would be impossible to find stronger proof of the life-saving power of vaccination than the above figures furnish. This is not all. In addition to the great reduction in the death rate, the attack rate is also remarkably lessened. During epidemics of smallpox, among those who have been successfully vaccinated the attack rate per thousand of the population is 6.7, whereas among the unvaccinated it is no less than 50.9 per thousand.

Yet another evidence of the value of vaccination is to be found in the character of the attacks. Among the vaccinated at least 80 per cent. of the cases are mild. Among the unvaccinated at least 80 per cent. are severe, or confluent cases, with a death rate of over 36 per cent., as compared with a death rate of under 5 per cent. in the cases occurring among the vaccinated.

In Germany, owing to the thorough system of compulsory vaccination and revaccination, smallpox has been banished from the Empire. In 1899, with a population of 54,000,000, there were only 28 deaths from the disease, and nearly all of these came in from some adjoining country.

The anti-vaccinationists have placed much reliance on the statistics of Dr. Keller; but it has been shown time after time that these statistics are utterly unreliable. They were garbled and arranged to prove his case. Nothing else could have been expected from one who did not believe in the existence of rabies and syphilis. Alfred Russell Wallace, in his attack on vaccination, appeals to these statistics, and, in doing so, destroys his own case.

To all the above facts, must be added the fearful scarring, maiming and blinding of prevaccination days.

A doctor at one of the meetings said:—"That the alliance between vaccination and medicine was an unholy one, for the reason that the science of medicine was for the cure of disease, not its progation."—Mail and Empire, 10th April. The same doctor "cited authorities and statistics to prove the inefficiency of vaccination. Its result was to undermine the health of the whole community. He urged continued agitation."—The Globe, 10th April.

It would be hard for the ingenuity of man to think of a greater concoction of absurdities than is met with in the above statements. The idea of staying an epidemic of smallpox by means of isolation is utterly impossible unless there be protected persons to put in charge of the sick. The moment isolation is resorted to, the persons detailed to take charge of the cases become ill, unless they have had the disease, or been properly vaccinated. This is the explanation of the fearful spread of smallpox epidemics. Isolation and sanitation cannot stay the march of this pest, because some persons must minister to those who are ill, and they thus become fresh victims. Let us hear no more of this utter nonsense.

Let us refer to Leicester for a moment. In the epidemic of 1892 there were 199 cases of smallpox, in the vaccinated, with two deaths. Of these cases 17 were confluent, 20 were coherent, 50 discrete and 112

mild. Among the unvaccinated there were 158 cases, with 19 deaths. There were 79 confluent cases, 36 coherent, 28 discrete and 15 mild. Surely no person would care to rest his case against the practice of vaccination on such statistics.

MEDICINE AS A PROFESSION.

That the name "profession" carries with it an honorable significance is fully borne out by the numbers who, in some way or other, adopt the designation. We have the professions of law, medicine, the church, musicians, engineers, the army and teaching. The professional man and the tradesman have much in common. They are both laborers in their respective ways, they have something to offer to the public, and they both expect a return from the public for the services they render it.

The tradesman, the dealer, the mechanic, the laborer, however, all place the return from the public first—they place the wage ahead of the service. The true spirit of a profession is to place the service before the wage. The tradesman may make and sell goods of several qualities, and at as many prices, according to the demands of the public. His main object is to make gain, and in doing so he performs a service to others.

The professional man, like others, must live, and must earn a wage. But he has only one quality of service to sell—his best. No matter whether there be any return for that service or not, the service is his best. The true ideal of a profession is that want will be accepted rather than a fee from the performance of some act that is dishonorable, or *unprofessional*. The army takes high place in the list of professions. Ruskin, the great sage, reaches the true reason when he says of the soldier:—"He holds his life at the service of the State. Our estimate of him is on this ultimate fact—of which we are well assured—that put him in a fortress breach, with all the pleasure of the world behind him and only death and his duty in front of him, he will keep his face to the front." Here, then, we have the real essence that must ever distinguish the professions from the trades—service first, wage second.

If any physician becomes mercenary, and puts the object of gain first, losing all sense of right, making his clients believe they have ailments, which they have not, in order to extort fees, he becomes the most degraded of tradesmen. On the other hand, if the tradesmen refuses to sell what he knows to be inferior, suffering himself the loss, and placing service before gain, he unconsciously becomes a true professional man. The boundary line between a profession and a trade, though thin, is thus shown to be real and important.

The medical man needs have no misgivings of his calling. It is one continual life of doing good. His methods are entirely beyond reproach. He is always and everywhere supposed to be in the service of man. This is the reason why the world honors him; and why medicine is the noblest of professions. It is his duty to maintain and confirm the dignity which has been assigned the doctor.—*Inter homines sapiens inter sapientes medicus.*

THE ONTARIO MEDICAL ASSOCIATION.

In another portion of THE CANADA LANCET we publish a strong appeal from Dr. Hunter on behalf of his association. What he says of the Ontario Medical Association is true of all medical societies. One of the evils of the medical profession is that its members do not mingle with each other enough. By keeping aloof from each other, we are apt to find out each others poor qualities, or at least we think we do; but by coming into contact, we find out our good qualities. There ought to be a large attendance at the Ontario Medical Association this year. Special efforts are being put forth to make this meeting both interesting and instructive. The Ontario Medical Association has done much for the profession of Ontario, and would do much more were it more generally supported by the members of the profession. We hope to see a large gathering. Please remember the date, the 16th, 17th and 18th of June.

SIR THOMAS WATSON ON THE ETIOLOGY OF INFLUENZA.

In a lecture, written in 1837, Sir Thomas Watson lengthily discusses the theories for the cause of influenza, or grip, for he uses this latter term. After mentioning the various theories, he winds up as follows: "Another hypothesis, more fanciful, perhaps, at first sight, than these, but more easily accommodated to the known phenomena of the distemper, attributes it to the presence of innumerable substances, endowed with vegetable or with animal life, and developed in unusual abundance under specific states of the atmosphere, in which they float, and by which they are carried hither and thither. Myriads of these animalcules or of these vegetable germs, come in contact with the numerous surfaces, and exercise a poisonous influence upon the system. Now, the sporules of certain fungi, which ruin the health, and destroy the vitality of large plants, on which they prey, are inconceivably small. I shall prove to you, presently, that vegetable effluvia are capable of producing, in the

human body, symptoms not very dissimilar from those of influenza. It is easy to conceive that atmospheric infusoria may rapidly congregate, or vivify, in masses sufficient to render deleterious the very air we breathe. If this be so, we can understand how such a cause of disease may first act here and there, and presently overspread large districts, how it may move, or be wafted from place to place, or be carried about by persons, how some germs or ova may remain after the visit, retaining vitality, and ready in future to spring into life and activity under favouring circumstances."

Here we have a very clear exposition of the microbic origin of the disease, stated in most lucid language. Sir Thomas Watson's great experience and splendid reasoning methods guided him to a correct conclusion, as far back as 1837.

THE LATE DR. ADDISON ON APPENDICITIS.

When Dr. James H. Richardson, of Toronto, was attending Dr. Addison's lectures on medicine, in the year 1845, the subject of peritonitis was the topic of one of these lectures. During the course of the lecture, Dr. Addison mentioned that in making a diagnosis of peritonitis several conditions must be borne in mind. Dr. Richardson's note is as follows: "Another source of fallacy may be from some disease going on in the abdomen, as of the vermiform process of the caecum, etc. Such cases are of frequent occurrence."

A HOSPITAL PATIENT SUCCESSFULLY SUED.

Dr. J. T. Fotheringham, of Toronto, attended professionally a patient in a private ward of a Toronto hospital. It had been made known that the payments to the hospital did not include medical or surgical attendance. Payment for Dr. Fotheringham's services were, however, refused. Judge Morson gave his decision against the patient. There have been several such suits recently, and it is to be hoped that the public will soon cease trying to escape the payment for attendance, seeking protection behind some hospital.

SIR JAMES GRANT BANQUETED.

The medical profession of Ottawa and vicinity tendered Sir James Grant a banquet on 22nd April. The affair was very successful.

PERSONAL AND NEWS ITEMS.

Dr. Mathers, of Lillooet, B.C., who has been seriously ill, has now recovered.

Dr. Cooper, of London, Ont., died on March 21st. The doctor had been ill for some time. Deceased was 34 years of age.

Dr. Carbert, formerly of Kilbride, and latterly travelling for a firm of publishers issuing medical books, will practice at Campbellville.

Dr. G. W. Boggs, of New Westminster B.C., who has been suffering from a severe illness, is much improved, and expects to be around again in a few days.

Dr. R. F. O'Brien, of Maitland, is now practicing at Elmsdale. He is taking the place of Dr. Densmore, who intends going to England to take a post-graduate course.

Dr. Thomas Douglas, of Arnprior, Ont., has gone to Regina, and. will in future reside and practice there. He is a graduate of Trinity University, Toronto, and has practiced for the past ten years at Arnprior

Dr. McKay left Winkler on March 19th for Regina where he will resume his practice. Before leaving the citizens of Winkler presented him with an address, accompanied by a handsome charm and monogram locket.

Dr. C. E. Flatt, after practicing his profession at Campbellville for twelve years, has left there for Assiniboia. His friends and neighbors of Nassagaweya joined in a hearty send-off. The village hall was crowded to the door. Mr. James Menzies read the farewell address, after which the doctor was presented with a purse of $135. The Chosen Friends, of which the doctor was a member, handed him an umbrella. Mrs. Flatt was the recipient of a handsome gold watch. The reply made by Dr. Flatt showed that he appreciated to the utmost the kindly expressions of good-will and also the separation about to take place. It was after eleven o'clock before the proceedings were at an end.

OBITUARY.

W. A. HOWELL, M.D.

Dr. William Allan Howell died at his residence in the Village of Jarvis on March 23, in his 67th year. He had for many years suffered from a spinal trouble, occasioned by his horse stumbling and throwing him violently to the ground.

RICHARD JOHNSON, M.D.

Dr. Richard Johnson, a leading physician of Charlottetown, P.E.I., died suddenly on March 20th.

W. W. BALDWIN, M.D.

William Warren Baldwin, M.D., son of the late Robert Baldwin, 22 Carlton street, Toronto, died on March 23 at Olive Island, Muskoka. The late Dr. Baldwin practised his profession for several years in Toronto, where he was well known until his failing health caused him to remove to Muskoka with his family, where he continued in practice. His widow was Miss Katharine Ridley of Hamilton. Two children survive him.

ANDREW HALLIDAY, M.B., C.M., GLASG., D. P. H. DUR.

Just one year from the sudden demise of Dr. W. S. Muir, of Truro, N.S., comes the sad intelligence of the death of Dr. Andrew Halliday, Nova Scotia's Provincial Bacteriologist. For some months Dr. Halliday had been suffering from pulmonary tuberculosis. In October last he went to Muskoka Sanatorium for treatment. Returning in December he continued the open air treatment near Halifax, with such good results that his friends were sanguine of his recovery. This, however, was not to be. About the middle of February complications arose, and he returned to Halifax for special care; but the trouble became gradually worse, and, on the evening of March 10th, his death took place at his home.

Born in Hutton, Dumfries, Scotland, in the year 1867, Dr. Halliday received his M.B.,C.M. from Glasgow University, graduating in 1888 with high honors. The following year he occupied the position of House Surgeon in the Dumfries Infirmary, after which he entered practice in the north of England. In 1892 he came to Nova Scotia, settling in Lower Stewiacke, where for five years he carried on an arduous country practice. During this period he conducted original investigations, and, at different times, published papers on "The Reaction of the Urine," "The Effect of Certain Drugs on Excretion of Urea," "The Action of Cardiac Tonics (Experimental)," and 'Experimental Study of the Action of Antipyretics."

In 1896 he took a post graduate course in Pathology and Bacteriology at McGill University. Moving to Shubenacadie in 1898 he fitted up a laboratory and further pursued his original work, subsequently publishing papers on "Migraine, with Special Reference to the Gastric Contents," and "A Study of Organisms in Water with Reference to the Causation of Summer Diarrhœa of Children."

In 1897 he read a paper before the British Medical Association in Montreal on "The Action of Certain Drugs on the Gastric Contents, which was published in the *British Medical Journal* in December of same year.

In 1898 he was appointed lecturer in Zoology in Dalhousie University, and in the following year gave the course in Practical Pathology in the Halifax Medical College, at the same time carrying on his practice in Shubenacadie. His ability as a teacher soon became recognized, and he quickly won the esteem of all with whom he came in contact. In 1901 the doctor returned to Scotland to qualify for the D.P.H. of Britain, and to further pursue the study of Pathology. He received his diploma from Durham University. Here special ability was recognized, and, in a written testimonial, Sir Geo. H. Philipson, M.D., D.C.L., LL.D., F.R.C.S., said: "As an Examiner it is a great pleasure to me to state that the manner in which he acquitted himself was deserving of my warmest commendation. He gave evidence of distinctive knowledge of the subjects relating to Sanitary Medicine and Practical Hygiene."

Returning to Nova Scotia he was appointed Provincial Bacteriologist and Pathologist, which position he filled with the utmost satisfaction to all until compelled to take leave of absence on account of failing health. Dr. Halliday's death, while yet in early manhood, is much regretted by all who knew him. At the Medical Society meeting, which he always attended, and where he was always ready to respond when called upon for a paper, he will be much missed. His marked enthusiasm and devotion to his profession as a practioner, his dogged perseverance as an investigator, and his pre-eminent success as a teacher, made him one of Nova Scotia's most brilliant young medical men. He leaves a widow, a daughter of the late Francis Parker, of Shubenacadie, and a son, who have the sincere sympathy of all in their sad bereavement.

D. GILBERT GORDON, B.A., H.D., L.R.C.P., EDIN.

The late Dr. D. Gilbert Gordon was a graduate in arts of the University of Toronto, obtaining his B. A. in 1883. He was one of the Masters in Upper Canada College from 1883 to 1887. During these years he was studying medicine, and graduated in 1887. He then gave up his position as Master in Upper Canada College, and proceeded to Britain for a period of post graduate study. While there he obtained the diplomas of the Royal College of Physicians of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow. He located in Toronto, where he pursued his practice till his health failed him a few months

ago, owing to an attack of tubercular peritonitis. He went south for his health, but becoming worse he sought treatment in Church Home and Infirmary, Baltimore, where he died on 28th March, about 45 years of age. For a number of years he was connected with the department of Anatomy in Trinity College. Latterly, he was Professor of Sanitary Science and Associate Professor of Clinical Medicine. He was a past president of the Toronto Medical Society. He took an active interest in outdoor sports, such as curling and bowling. His wife, the daughter of Sir Thomas Taylor, and three children survive him. Rev. C. W. Gordon—Ralph Connor—of Winnipeg, Dr. A. R. Gordon of Toronto, Robertson Gordon, C.E., of Subdury, and Mr. Henry Gordon of London, are brothers. His father is Rev. Daniel Gordon, a Presbyterian minister, at one time located in the county of Glengarry. The late Dr. Gordon was an able practitioner, a true friend, an honorable member of the profession and an energetic teacher. His life was a strenuous life. It was a steady pressing onwards and a continuous ascent upwards. His early death in the very zenith of his usefulness is a severe bereavement to his relatives and a great loss to the community and the College with which he was identified. His whole career was a beautiful fulfilment of the words of Pope:

> "Honour and shame from no condition rise,
> Act well your part, there all the honour lies."

BOOK REVIEWS.

LEA'S SERIES OF POCKET TEXT BOOKS.

DISEASES OF THE SKIN.

A Manual for Students and Practitioners, by Joseph Grindon, Ph.B., M.D. Series Edited by Bern. B. Gallaudet, M.D. 377 pages. 39 engravings and plates. Price $2.00. Lea Brothers & Co., Philadelphia.

THIS little work will prove a valuable addition to that popular series of which it forms a part. While chiefly intended for the student, it cannot but be of use to the busy practitioner, whose time will not permit a perusal of the more comprehensive treatises on the subject. As the author says in his preface, the work aims at giving "a compact presentation of its subject according to the latest developments."

In the introduction the elimentary or initial lesions are taken up and described, after which he deals with those lesions which are derived from the original. Following this considerable attention is given to etiology—general and local. Among the general causes, heredity, age,

sex, race, climate, season and drugs are all discussed, and their influence on certain diseases referred to. As local causes, attention is directed to trauma, the vegetable parasites, etc. Then come some general rules to guide the student in making a diagnosis.

From pages 32 to 156 the inflammations of the skin are dealt with, and considerable space is devoted to that most common of all diseases, eczema. The drug rashes are treated fully in this section.

The granulomata are next taken up, special attention being given to syphilis and the syphilides. The tissues, diseases due to annual parasites, the hypertrophies, the atrophies, new growths of the skin, diseases of the glands, hair follicles, etc., all receive due consideration.

Each disease is taken up under several heads, namely, definition, description, etiology, diagnosis and treatment. In many diseases a paragraph is devoted to the pathology of the condition. The work contains numerous valuable perscriptions.

The book is beautifully bound, the paper and printing is of the best and many of the illustrations are excellent.

SCHMAUS' PATHOLOGY.

A Text-Book of Pathology and Pathological Anatomy. By Dr. Hans Schmaus, Professor in the Pathological Institute at Munich. Translated from the Sixth German Edition by A. E. Thayer, M.D., Instructor in Pathology, and edited, with additions, by James Ewing, M.D., Professor of Pathology in Cornell University Medical College, New York. Octavo. 602 pages. 351 engravings. 35 colored inset plates. Price $4.00. Lea Brothers & Co., Philadelphia.

In scientific medicine the Germans lead the world. With them pathology is the very ground work of all medicine. They have produced a large number of valuable works on this subject. Professor Schmaus' work has been so well received in Germany that in a comparatively short time it ran through six editions. It has been translated into English by thoroughly competent men. Both the editor and translator are pathologists of high standing. They are certainly to be congratulated in the successful manner in which they have performed their task in presenting this admirable work to English speaking students.

In the preface Professor Ewing says: "There is a notable absence in these pages of the argumentive style, the quotation of authorities and the pursuit of personal opinion that are prominent features of larger works, and likewise absent is the full discussion of many topics that properly belong to a work of reference." This we have found to be correct. The subject matter, however, is thoroughly treated and the text is clear and concise.

The work is divided into two parts. Part I. deals with General Pathology; Part II. with Special Pathology.

Under General Pathology, disorders of the circulation are first dealt with. He then takes up what he terms the "regressive processes." In this chapter necrosis and atrophy are considered, and a large section is devoted to the so-called degenerations.

Chapter three is devoted to the "progressive process," and under this heading inflammation, the infectious granulomata and tumors are fully discussed.

In the first part of the work attention is given to a subject which is too often overlooked in works on pathology. We refer to the chapter on congenital anomalies and deformities. The vegetable and animal parasites receive due consideration.

Part II., as stated before, deals with special pathology. In this part the chapter on diseases of the digestive organs is particularly complete and satisfactory. The section on nervous diseases embodies all the latest teaching in that department. Space will not permit a more detailed description of the work, but we can heartily recommend it to any one wishing an accurate and thoroughly up-to-date book on the subject. The illustrations are unsurpassed by anything we have seen in any book on pathology. There are 351 engravings, together with 35 colored inset plates. These add greatly to the value of the work.

The printing, paper and binding are all of the usual high standard of Lea Brothers' publications.

THE AMERICAN TEXT-BOOK OF OBSTETRICS.

Second Edition, thoroughly revised and enlarged. The American Text-Book of Obstetrics. In two Volumes, Edited by Richard C. Norris, M.D.; Art Editor, Robert L. Dickenson, M.D. Second Edition, thoroughly revised and enlarged. Two handsome imperial octavo Volumes of about 600 pages each; nearly 600 text illustrations, and 49 colored and half-tone plates. Per Vol., Cloth, $3.50 net; Sheep or Half Morocco, $4.00 net. Publisher, W. B. Saunders & Co., Philadelphia. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

SINCE the appearance of the first edition of this text-book in 1895 many important advances have been made in the science and art of midwifery. Recent research in bacteriology and pathology have enabled us to appreciate more fully many of the complications arising in pregnancy. The ever-widening field of surgery has made it possible to save lives that otherwise must inevitably be lost. Recognizing this, the Editor has considered it necessary to bring out a new edition of his work. As in the first, he has associated with him as contributors gentle-

men of the foremost rank in this particular branch of Medicine—the very names of whom ought to be sufficient guarantee of the high character of the work. Owing to the extensive additions in this new edition, it has been published in two volumes, which is certainly a great improvement. The volumes are convenient, easily handled and elegantly got up. The treatment of the subjects by the different contributors is all that could be desired. Each writer makes his subject clear and to the point.

The importance of a thorough knowledge of the anatomy and physiology of the female generative organs is fully recognized and considerable space has been accorded to each.

The pathology of pregnancy is discussed at length. The mechanism of labor and dystocia, which usually cause the student so much trouble, are treated here in a most satisfactory manner.

In volume two the management of the puerperium and the pathology of this state are dealt with very fully. The latter part of this volume is devoted to obstetric surgery.

The work is, practically speaking, an exposition of all that is known on the subject. It is thoroughly reliable and we can heartily recommend it to practitioners and students as in every respect up-to-date. The number and high character of the illustrations add greatly to its value.

The work reflects the highest credit on the editor, contributors and publisher alike. We have no doubt but that this present edition will be well received by the profession, for it is certainly a magnificent production.

THE MEDICAL EPITOME SERIES. DISEASES OF THE SKIN. A MANUAL FOR STUDENTS AND PRACTITIONERS.

By Alfred Schalek, M. D., Instructor of Dermatology, Genito-Urinary, and Venereal Diseases, Rush Medical College, Chicago, Illinois. Series Edited by V. C. Pedersen, A. M., M. D., &c., &c. Illustrated with 34 engravings. Lea Brothers & Co., Philadelphia and New York. Price $1.00 net.

To appreciate this little book, one must peruse it. Though very brief, it is very reliable and complete. There are some useful statements regarding the anatomy of the skin, general symptomatology, general diagnosis, general therapeutics, and general rules in dermatology. The classification adopted is inflammations, hæmorrhages, hypertrophies, atrophies, new growths, neuroses, diseases of the appendages of the skin, and parasitic diseases. The various diseases are then taken up in alphabetical order. Each disease is described under the headings :—synonyms, definition, symptoms, etiology, pathology, diagnosis, and treatment. The book is full of useful formulæ. All round it is an excellent little work.

THE MATTISON METHOD IN MORPHINISM.

A modern Humane Treatment of the Disease. By J. B. Mattison, M.D., Medical Director, Brooklyn Home for Narcotic Inebriates. Published by E. B. Treat & Co., New York, 1902. Price $1.00.

THIS little book can be highly recommended. It should be in the hands of every one who has a morphine habitué to treat, and who has not at some time or other? The advice is sound and the results very satisfactory. There is a judicious use of the bromides while the morphia is being withdrawn. But the little book must be read to be fully appreciated.

THE TREATMENT OF TABETIC ATAXIA BY MEANS OF SYSTEMATIC EXERCISE.

An exposition of the Principles and Practice of Compensatory Movement Treatment. By Dr. H. S. Frenkel Medical Superintendent of the Sanatorium "Freihof" in Heiden (Switzerland). Only Authorized English Edition Translated and Edited by L. Freyberger, M.D., M.R.C.P., M.R.C.S., Eng., Pathologist to the Great Northern Central Hospital &c. With 103 Illustrations Price $3.00. Philadelphia, P. Blakiston's Son & Co. 1902, Toronto, Chandler & massey

DR. FRENKEL published his first observations on this method of treatment in 1889. Since then he has been working hard at this subject. He does not claim for this plan of treatment that it will cure the disease, only that it controls the ataxia. The essential features of the treatment are its simplicity and that it can be carried out with very little apparatus; and that the results come from repeating certain movements, that is from exercise, rather than from athletic strengthening of the muscles. The first portion of the book deals with the theory of ataxia, and discusses such topics as incoördination, causation of tabetic ataxia, muscular hypotonia in tabes, theory of tabetic ataxia &c. This portion of the work is particularly well done. The author claims that sensory impressions, coming from objects around us, as well as from moving parts of our body, are requisite for the production of coördination. These sensations are necessary for the acquisition of new movements and also for the performance of those already acquired. Our relation to the external world is derived mainly through the sensibility of the skin; while our knowledge of the position of our limbs depends upon the sensibility of the joints and muscles. We must regard the limbs as objects of the external world, and that their various conditions are transmitted to the central nervous system by means of sensory impressions in the same way as if they belonged to the world outside. It is on this theory of ataxia that the author works out his method of treatment.

The most important charactistic of the muscular substance is its ability of being exercised,or reproducing in a peculiar manner,impressions,

or, more generally speaking, states of innervation which it had already undergone a great many times. In learning something new there must be a precise apperception of it, the mind must be concentrated upon it, and the mental impression it produces must be oft repeated. It is in this way we learn movements. Following this theory up, Dr. Frenkel has worked out a system of arm, hand, finger, leg, foot, and body movements. These are repeated until they become familiar, and are readily reproduced, according to that law of the nervous system by which it can reproduce former impressions. This is the scientific basis of the treatment by compensatory movements. The work as a whole is highly instructive and most fascinating.

BACTERIOLOGICAL TECHNIQUE.

Bacteriological Technique. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. Eyre M.D., F.R.S., Edin, Bacteriologist to Guy's Hospital, and Lecturer on Bacteriology at the Medical and Dental Schools, etc. Octavo of 375 pages, with 170 illustrations. Philadelphia and London : W. B. Saunders & Co., 1902. Cloth, $2.50 net. Canadian agents Carveth & Co., Toronto.

THIS book presents concisely, yet clearly, the various methods at present in use for the study of bacteria ; and elucidates such points in their life histories that are debatable, or still undetermined. Moreover it does not encumber the student with the many uncertain methods usually crowded into books of this kind, only those being included that are capable of giving satisfactory results,even in the hands of beginners. The author has adopted the excellent terminology introduced by Chester in his recent work on ' Determinative Bacteriology,' and believes that its inclusion will be calculated to induce, in the student, habits of accurate observation and concise description.

In the opening chapters and, throughout the work, bacteriological apparatus of every kind is minutely described and special attention is devoted to ways of preparing media and methods of cultivation. The same may be said of the methods of identification,and the scheme of study in this department is faithfully followed out under the headings, microscopical examination of cultivations, microscopic methods, chemical methods, physical methods, and methods of inoculation ; a whole chapter being given over to this last heading. In the chapter on ' outlines for study ' a very thorough method is indicated for teaching a class of students the elements of practical bacteriology.

The last chapter takes up the bacteriological examination of water, sewage, air, soil, milk, butter, meats etc., and treats the subject in such

a way that it will be of the greatest value to the technical student generally as well as the medical man.

The book is not intended to replace the text books of bacteriology already in use, but " aims at supplementing the usually scanty details of technique, and at instructing the student how to fit up and adapt apparatus for his daily work." That the desired end has been attained, a careful study of the book will show, and undoubtedly the work will become deservidly popular. The illustrations are numerous the binding is good, and the price moderate.

THE PRACTITIONER'S GUIDE.

By J. Walter Carr, M. D., F.R.C.P. Physician to the Royal Free Hospital ; T. Pickering Pick, F. R. C. S., Consulting Surgeon to St. George's Hospital ; A. H. G. Doran F.R. C.S., Surgeon to the Samaritan Free Hospital ; and Andrew Duncan, M.D.,B.S., F.R. C.S., M.R.C.P., Lecturer on Tropical Medicine at the London School of Tropical Medicine. London, New York and Bombay. Longman's, Green, & Co., Toronto, J. A. Carveth, & Co. 1902, Price $6.00

THE names of the authors, and publishers are sufficient guarantee for the merits and make-up of the work before us. Drs. Carr and Duncan, and Messrs. Pick and Doran are well known, and highly esteemed. contributors to medical and surgical literature. The present work takes the form of a dictionary. It contains over a 1100 pages. The subjects are arranged alphabetically. The descriptions are usually brief ; and, as a consequence,the authors succeed in covering the whole field of medicine in surgery. The aim of the authors has been to produce a practical work and therefore, but little is said on pathology. A frequent reference to many of the articles, and a careful study of what is written, enables us to recommend the work in the highest terms as a thoroughly reliable guide for the practitioner. The medical and surgical diseases likely to be met with, are treated of in a very satisfactory lucid manner.

A TEXT-BOOK OF OBSTETRICS.

A Text-Book for the use of Students and Practitioners, by J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University, ; Obstetrician-in-Chief to the Johns Hopkins Hospital, Gynaecologist to the Union Protestant Infirmary, Baltimore, Md. With eight colored plates and six hundred and thirty illustrations in the Text. New York and London, D. Appleton & Co. Toronto, N. Morang & Co., 1903. Price

IN a volume of 845 pages, Dr. Williams makes his bow before the medical profession. There are many excellent works on the subject of obstetrics, and one might very naturally ask why another large one should be added to the list. The answer is at once found by a perusal of the present work. To begin with, the book is a work of art, alike in

binding, typography, paper, and illustrations. It is just such a book as one enjoys reading.

Most of the illustrations are original, and from photographs, and their execution merits much praise. The author has made a very satisfactory division of the subjects into anatomy, physiology and development of the ovum, physiology of pregnancy, physiology of labour, obstetric surgery, pathology of pregnancy, pathology of labour, and pathology of puerperium. The matter given under each of these headings is full and trustworthy. A thorough scrutiny of the index of 27 pages shows that nothing has been omitted that should find a place in such a work.

The author throughout maintains a judicial style. He weighs well the literature on each topic, and gives the most accepted views. His own views are very fully stated, and indicate a wide experience and a deep acquaintanceship with those of other writers and teachers upon the various subjects embraced in the obstetrical art. To appreciate Dr. Williams work one must read it, and to read it is a real enjoyment, and highly profitable. We predict that this latest work on obstetrics will soon become a great favorite.

(American Edition of Nothnagel's Practice.)

DISEASES OF THE STOMACH.

Diseases of the Stomach. By Dr. F. Riegel, of Giessen. Edited, with additions, by Charles G. Stockton, M. D., Professor of Medicine in the University of Buffalo. Handsome octavo volume of 835 pages, illustrated, including 6 full-page plates. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Toronto: J. A. Carveth & Co. $5.00 net; Half Morocco, $6.00 net.

THIS volume, like the others of this excellent practice, is thorough and complete. The importance of examining the stomach-contents in diagnosis, and the various methods of obtaining the contents and performing the examination, are discussed with the accuracy and clearness that spring from wide experience. Full consideration is given to the hydrochloric acid question as a factor in the pathology of stomach diseases, the latest views having been incorporated by the editor. Particular attention has been accorded disturbances of motility, and their influence in the disturbances of secretion. It is evident that careful study has been devoted to the subject of impairment of the absorptive powers, and the significance of gas-fermentation has been emphasized.

The eminent editor, a recognized authority on diseases of the stomach, has added to the already excellent German text his own extensive experience, bringing the work in accord with our present knowledge. We are confident that for scientific excellence and completeness, as well as for mechanical perfection, this work stands unrivalled.

SIR JAMES GRANT, M D., K.C.M.G., OTTAWA.

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*BRAIN POWER, HOW TO PRESERVE IT.

By SIR JAMES GRANT, M.D., K.C.M.G.,
President Royal Society of Canada.

I AM CONFIDENT I am expressing the sympathies and feelings of this large audience, in the Capital of the Dominion of Canada, when I say that we, one and all, rejoice that His Most Gracious Majesty, King Edward, has been restored to health, and anointed King over a loyal and united Empire.

Twenty-one years ago, at a meeting held at Government House, Ottawa, this Society was determined upon by Lord Lorne, now Duke of Argyll, and shortly afterwards called into action with the late Sir William Dawson as first President. Since that date the meetings, with few exceptions, have been held at Ottawa, and the present records of the Society point to a widely diversified line of work, in its various departments, all of which gives undoubted evidence of intellectual development of which any colony in the empire might justly feel proud. The duty which, by the kindness of this Society, I am called upon to perform, I regret has not fallen into other hands. In accepting the task I feel confident of the sympathy of my audience. It is a matter of satisfaction to know that the success of such meetings does not depend on the occupant of the presidential chair, but is chiefly due to the eminent workers in the various sections of the Society.

The energy and marked ability of the late General Secretary, Sir John Bourinot, who, since the incipient stage of development of the Society, brought to light facts of the greatest moment, as to men and measures in all parts of our Dominion, redounding greatly to the credit of one, who by his painstaking research and scholarly attainments, has left an imperishable record on this continent. Edward Gibbon charmingly expressed the idea that diligence and accuracy are the only merits which an historical writer can ascribe to himself. So in scientific research, like qualifications are cardinal qualities. To decide on the true significance of data springing daily from the vast sources of scientific investigation, the result of observations and experiments, a well balanced mind and careful reflection are necessary to winnow out the practical and careful from the doubtful and uncertain. Investiga-

* Presidential Address before the Royal Society of Canada, 19th May, 1903.

tion and experiment are widespread, and as to results, fortunately, there is greatly increased reliance. Doubt, says Thackeray, is always crying "pshaw."

We must not begin by doubting, but by doing, and then sifting. A thousand doubters would not make a Lister, a Pasteur, or a Koch. Aristotle says if you doubt you must doubt well, but to doubt well you must first work well. I feel confident that one of the highest aspirations of this Society is that its observations, from year to year, may fructify and extend into all lands, and the reciprocity of feeling and action thus aroused, strengthen the scientific and literary ties of the world. In this prospective development we must all endeavor to assist.

The flame of science must burn within as a vestal fire. Drudgery and long waiting for opportunity are truly discouraging, but the Divine Spark will not disappear while the investigator is true and honorable, and keeping such in view for pure purposes. As a rule lecturers are teachers in a sense, and their work lives after them.

Voltaire says of Virgil, that he was Homer's greatest achievement. Dante was Virgil's greatest light. In science we find precisely the same. The man passes away, but his work remains after him; and so, in the records of our Society, we trust an influence will be exercised such as will redound to the credit of this association.

Our annual meetings present a feature of great interest in the reports of the allied scientific societies throughout the Dominion. It is needless to say how welcome are the representatives, and how much we value their taking part in our discussions, and thus stimulating in a most encouraging manner the interchange of thought, which widens the area of scientific research.

The subject which I have chosen for the present discussion is "Brain Power and how to Preserve it." In the days of the ancient Greeks the composition of the body was, in a measure, defined by Aristotle, as being composed of parts differing from each other in form, consistency, color and texture. In these diversified parts brain and nerve tissues are exceedingly important factors. Not, however, until the concluding years of the eighteenth century was an impetus given to anatomical research, by the Hunters of England, the Meckels of Germany, as well as Cuvier and St. Hilaire of France, by whose untiring researches the minute structure of animal tissues, was placed on a more defined and uniform basis. In the past century great light was thrown on the entire subject of general anatomy by Xavier Bichat, one of the most accurate observers in all France, in the Napoleonic Era. The most remarkable advance, however, was made in the third

decennium of the past century, by improving the method of examining minute objects by compound lenses. For more than half a century microscopes have extended the domain of biological science, as to bring within our comprehension, a clearly defined basis of human structure such as could not fail to convey a tolerably correct idea of functional activity in the human system. In 1831 the celebrated botanist, Robert Brown, announced for the first time that an aureola or nucleus was seen in many plants, and that this circular spot was present in each cell. In 1839, Theodore Schwann discovered that there was one universal principle of development in the elementary part of organisms, consisting in the formation of cells. This great advance in biological science is undoubtedly the most important feature of the past century, and one which has given an impetus to physiological investigations of vast moment to the entire human race, owing to the influence thus exercised on the progress of practical medicine.

John Goodsir, the great Anatomist of Edinburgh, announced in 1842, that the nucleus is the reproductive organ of the cell, and that new cells are formed from it; in fact that an organic continuity existed between the mother cell and its descendants. through the nucleus. Virchow, in his "Cellular Pathology," 1858, maintained that, in pathological structures, there is actually no cell development *de novo*; where a cell is found, there must have been a cell before, in fact cell development is continuous by descent.

In 1842, John Goodsir established the principle that cells are the ultimate secreting agents. A nerve cell is not a secreting cell, however, like the general glandular cells of the system. Nerve cells, through the remarkable changes which take place in them, generate that form of energy, known to exist as a special outcome of a nervous system, and defined as "Nerve Energy" or "Nerve Force." A nerve fibre is actually an essential part of the cell with which it is continuous, and the cell and nerve fibre associated make up what is termed a neuron, now known to play so important a roll in the entire nervous system.

The Brain, like other parts of the body, may be in a state of activity or fatigue. When active, the nucleus increases in size, and when fatigued, the nucleus diminishes, and finally shrivels up, becoming in fact useless, as far as functional activity is concerned. It is very remarkable that nerve cells have not the power of reproducing their kind, their especial power being closely connected with the evolution of nerve energy. This is a point on which I desire to place particular stress, as once a portion of the brain, or other nerve centre, is destroyed, new brain material, or a new nerve centre cannot be produced, to replace the injured parts, as

takes place in other portions of the human frame, where when bones, tendons, and such like, are injured, nature comes to the relief, by new tissues, in every respect analagous to the part destroyed. This forms *the key note* to the subject matter in hand, and demonstrates beyond doubt with what care and watchfulness nerve tissue should be guarded, to retain intact normal mental vigor and ordinary nerve power.

Passing now from minute cellular facts to general principles, I am confident you will agree with me in the statement that "brains rule the world and the individual." The great problem of the present day, with which our educationalists, as a whole, have to deal, in the midst of a varied practical experience, is "How to build the best brains out of the material at our disposal;" not for men only, but for women as well. The best possible brains for both sexes is the surest way of strengthening the fabric of our generation As good a brain is required for the management of the home, as for the guidance of the State; as in both sexes the force evolved, more than any other force in the system, enables men and women by independence and normal aptitude, to bear the burdens of life, and perform their duties and responsibilities with dignity, grace and home spun individuality. These are the peculiarities which make a people and crown with success their efforts in life. The great social problem of the present day is "The building of the Brain," and the influence exercised in this direction devolves largely on our teachers, the very pioneers of our Educational System, It must be built up with careful attention to the rest of the body, as no perfect brain crowns an imperfectly developed body. As the brain furnishes the physical support of mental activity, it is reasonable to expect this will vary with the precise condition of this organ. Excessive brain work tends to exhaust nervous energy and, at the same time, to lower mental power and efficiency. In children, where the stock of brain vigor is in proportion to structural development, the indications of fatigue crop out much sooner, and it is exceedingly important that brain energy should not be overtaxed, but rather in proportion to the normal supply. As Herbert Spencer has charmingly expressed it, "The development of the higher mental faculties is only safe, and in fact normal, when a firm basis of physical strength and well-being is laid down." To force on the functions in advance is likely to endanger the very structure of the brain, and in time diminish seriously intellectual activity. Fabre tells us that "childhood is a time of endless learning," not of endless cramming, and, fortunately, this view of the subject is gaining ground rapidly. Beecher said, "the power of doing is education, not how much a man knows, but how much he can accomplish by putting his faculties into

operation. Many know, and know, and know, and actually keep on knowing until they have lost the power of doing; and so with eating, some go on eating and eating, until it takes the entire strength of the system to carry them along." So by excessive knowledge the mind is liable to grow stupid and fat. True education, sound brain culture, is the faculty of turning it to practical account. How absolutely useless is the man who knows everything and can do nothing perfectly. The very common sense being educated out of him. This is, in fact, almost a diseased state of mind, not likely to result in the highest achievements of either mental or physical development.

This is a progressive age, an age of speciality, and when the natural bent of the youth's mind is known, greater excellence will be attained in the future life of the child by directing education to meet natural capacity. As Gorst has well and ably expressed it, "The aim of education should be to get the best out of each individual, and not to obtain an average of mediocrity," and "that the enormous expenditure of public money upon machine-made human automata is sheer waste. Fortunately, a marked change for the better is now in progress in educational matters. Normal schools, manual training schools, such as introduced into Canada by Sir William McDonald, and technical education, as advocated by Mr. Carnegie, all have their places, and, exercised prudently, their power and educational influence. The kindergarten system, at the ages of six or seven years, as advocated by Froebel and his successors, in the primary grades of our public school system, is accomplishing much good and safe educational work, intellectual and physical development keeping pace with each other.

Dr. Newsholme, Health Officer for Brighton, England, has recently pointed out the lower age limit of children for school attendance. (*Public Health Record*, 1902). The chief plea is that children under five years of age should be excluded from public elementary schools. On the roll of infant schools in England and Wales, between the ages of two or three years and four or five years, constituted in 1900, there is about 10.9 per cent. of the total scholars of all ages in elementary schools, chiefly owing to the fact that many mothers, engaged in other daily work, seek this method of being relieved of the charge of their children for four or five hours daily. The occasional advice of school teachers that the sooner children are sent to school the better, leads to the same result. Premature school attendance is most decidedly injurious, and gradually saps brain vitality, and is followed, in time, by both mental and physical deterioration. Doubtless, the first seven years of life are for growth rather than for elaboration of structure and function; and,

by far, the most important point is that a large preventable loss of life is the result of school attendance at ages under five years, the difficulty being in the greater proportion of the deaths, commencing by the overstrain of the brain in the very formative process of thought. The important point is the death rate from communicable diseases, under five years of age, is greater and the fatality more than in ages higher. Physical training and the cultivation of observation and discipline are precedent in the young child, but any serious attempt at intellectual education, before five years, is contra-indicated by the present knowledge of brain structure and function.

Fortunately, in Canada, children rarely attend school before five or seven years, and every degree of care and prudence are exercised to guard the gradual development of intellectual activity.

Nowadays, we really want our young people trained so as to become, in every possible way, useful members of society. Right judgment is only developed by discipline, all of which springs from method and study. No educational training, no turning over of the pabulum of thought, the brain, will at once fit a lad for any particular calling in life. The chief test of education is the outcome of his life at maturity. This constitutes the practical examination of life, and the practical verdict is the outcome at the period of manhood. Here we have the very process of development and the result attained. This training is the actual building of a brain. It is difficult to give even an outline of the extremely delicate and complicated operation of the human brain, of which there are not two alike in the entire human family, and yet we frequently expect equal results of brain power, contrary to the very gifts of natural capacity. The school of life is the one for which our young generation has to be fitted, and, as Bishop Creighton of London has ably expressed it, the chief teacher is the actual experience which one undergoes. The best built brain is that which arouses some interest which will follow through life, and lead to results of a practical and telling character. Thus, the mind becomes equipped so as to enable it to grapple successfully with the emergencies of life. This is in fact the very basis of technical education, so much in keeping with the progress and general advancement of the age. The indispensible object of education is to build a brain, and, if possible, to build one strong and vigorous, guarding carefully surrounding circumstances, so that strength of body and strength of brain may constitute the balance, so requisite for a useful and practical calling.

In brain weights and intellectual capacity, according to Esquirol, no size or form of head is incident to idiocy, or to superior talent. The

largest weight of brain known is that of the Russian Novelist, Turgenieff, whose brain weighed, at the time of his death, 65 years of age, 71 ounces. The following celebrated group, Jeffery, Thackeray, Cuvier, Combe, Spurzheim, and Sir James Simpson, had brain weights from 54 to 58.6 ounces. A second important group of men with rare genius and marked ability, Hubert, Grote, Babbage, Leibey, Gull, and Gambetta, had an average brain weight from 40 to 49 ounces. Colder climates appear to favor large brains, which may in a measure account for the marked intellectual activity of our Canadian people. The table of average brain weights of various nationalities, from the Anthropological publications of Topinard and Manouvrier, produces evidence of greater brain weights in colder climates. As proof of such, it is known that the colder air of the United States produces larger brains in the negroes than the warm air of South Africa. Weighing the brain is the only certain method of settling its exact proportions. The fluid inside the skull, known as the Cerebro-spinal, may occupy considerable space in the cranial cavity, and a small brain may be present. It is not unusual to find large brains, with small minds, in proof of which Dr. Sims, *Popular Science Monthly* 1898, records 125 persons of ordinary or weak minds, whose brains were larger than those of many distinguished and well-known men, such as Daniel Webster, Agazziz, Napoleon I., Lord Byron, Baron Dupuytren and General Skoboleff of Russia, world renowned men, whose brains weighed less than 53 ounces. In fact, the present impression is that very intelligent men do not differ greatly, as to brain weights, from the less gifted. Dr. Oliver Wendall Holmes, the well-known author of "The Professor at the Breakfast Table" and a celebrated anatomist, said "The walls of the head are double with a great chamber of air between them, over the smallest and most crowded organs. Can you tell me how much money there is in a safe which has thick walls by kneading the knobs with your fingers? So when a man fumbles about my head, and talks about the organs of individuality, size, etc., I trust him as much as I should if he felt over the outside of my strong box, and told me that there was a five dollar bill under that rivet." Again, larger and complicated brain convolutions are by some supposed to be associated with superior mental power. In the lower animals such is not borne out. Rodents, such as beavers, rats and mice, have little brains and no convolutions, and the beaver particularly exhibits great mechanical skill in the construction of dams, and the storing of food for the winter. The sheep has numerous convolutions in the brain with well marked evidence of great stupidity. Wagner, of Göttingen, states he has never seen examples of highly complicated convolutions even

among eminent men whose brains he examined. Special mental gifts have not, so far, been proved to be the result of many convolutions.

Again, we know that exercise and training strengthen the brain and increase its weight and size in man, of which Gladstone was a remarkable instance. All things considered, the prospect is that brain will still go on developing towards marked increased activity, and practical usefulness in the Genus Homo.

The physical aspect of brain power presents many points of interest. We can observe and study the brain and determine upon what conditions this complicated organ acts, vigorously or otherwise. Is a good brain likely to accompany a good physique? It has been most conclusively pointed out that the brain of marked ability in any particular line of thought and action, is superior in size, weight and complexity of structure, to the ordinary brain. A popular idea is that brain must be developed at the expense of muscle, and vice versa. Such views fortunately are not borne out, by either science or history. Professor Beard's views on the longevity of brain workers is an important document. Taking members of the Cabinets of England and Canada, or the Congress of the American Republic, the average in height, weight, girth and physical development generally, is most remarkable. The law of the dependence of mental activity is, in fact, closely allied to physical vigor. Lincoln, Conkling and Gladstone retained a quantum of physical power, each in a particular line, rail splitting, boxing and tree felling, and so with Tennyson, Beecher, Huxley and Webster, each had his day of physical training, as well as of mental culture. With such evidences, is intellectual greatness the only thing worth striving for, and physical powers a matter of secondary consideration? Gorging the brain in ordinary schools, from six to nine hours daily, with only one to three hours each day in the open air, is really not likely to bring about such results, as frequently sought after. With many years of practical observation on this point, I feel confident the intellectual development and physical growth of the young generation around us will be greatly promoted by four hours of exercise in the open air and four hours of study, and the final results better in every particular than by the system now in operation. The facts noted by Chadwick, of England, of factory children, are most valuable. The "half-time system," giving four hours of regular work in the factory, and four hours of study, has been followed by remarkable results; in fact, the progress in education is more marked than with children who spent the eight hours in study. The leaders in brain work, in both England and the Continent to-day, give three to five hours daily to the desk or laboratory. Such data point to

the necessity of an equal exercise of mental and physical capacity, in order to build up successfully mental and physical power. The most precious truths, like the most precious metals, are in small space. All are agreed that the problems of the universe, so far as physiologists have been able to define them, are really locked in "the Cerebral Cell." This is an interesting time in the new life of our Dominion, and the sports and games of University men, and young people generally, are such that we cannot agree in the idea that the reign of bone and muscle is over, and that the reign of brain and nerves is taking its place, even with the cerebral cell, under lock and key. Many suits of armour in the tower of London would not fit our youths of eighteen to-day, and it is a well known fact that the stone coffins, *sarcophagi*, are fully half a head too short for our average Canadian. As to feats of physical prowess, such as foot-ball, hockey, running and leaping, our young athletes hold first rank, and such developed activity has not lessened their mental culture. Under such circumstances the brain is not a silent receptacle, but "a copious promptuary" of learning and device. Games, says Sir James Paget, are admirable, in all the chief constituent qualities of recreation, but besides this, they exercise a moral influence of great value in business or in daily work. Professor Sir Michael Foster, in two recent Rede lectures to the Royal Society, London, tells us that even in muscular work, the weariness of the brain, like the work of the muscles, is accompanied by chemical change; that the chemical changes, though differing in detail, are of the same order in the brain as in the muscle. "If there be any truth in what I have laid before you," says Foster, "the sound way to extend those limits is not so much by rendering the brain more agile,as by encouraging the humbler help-mates, so that their more efficient co-operation may defer the onset of weakness." Games not only keep a man healthy, but encourage his work and give him a better knowledge of his associates. The Duke of Wellington truly said: "The Battle of Waterloo was won in the playfields of Eton." Let games, in the proper sense, be the recreation and not the business of life. Thus will brain power gain full force, and conduce to the success of the varied duties of life.

After all, a young man with nothing but brains would be a poor object in life. It is the battle of ideas we require, and he who is not up to the mark must eventually take a back seat. A combination of brain and muscle won the battle of Paardeberg, which has placed Canada to-day in an honored position throughout the civilized world.

I have presented to you on the present occasion the known groundwork, as to the best and safest means of preserving brain power, and, at

the same time, to so guard the complicated nervous machinery of the human system as to preserve health and strength, and develop the pabulum of thought to meet the wants and requirements of an exacting age. Owing to the progress in brain knowledge within the last thirty or forty years, we look forward with great hopes to the outcome of this twentieth century, during which many of the principles presented on the present occasion will doubtless be established on a sound and substantial basis. Throughout let that idea guide and direct our efforts with the hope that the charming words of Wordsworth may be fully realized:

> "In the unreasoning progress of the of the world,
> A wiser spirit is at work for us,
> A better eye than ours."

MEDICAL REMINISCENCES OF TORONTO.

By JAMES H. RICHARDSON, M.D., M.R.C.S., Eng.

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MY recollections of "Muddy Little York," date back to the early thirties of the last century, my father having brought the family there from Presque Isle,—my birthplace in 1823 to York in 1826. My maternal grand father, John Dennis, had his homestead, with a few acres of orchard and garden, on the north-east corner of King and Yonge Sts., and my father, about 1832 (I cannot state the exact date) built a residence on the west side of Bay street near the place now occupied by the National Club. Although there were scattered residences beyond, the town might be said to be bounded by Bay street on the west and by Newgate, now Adelaide street, on the north. At such an early age my experiences were very necessarily limited. Between the ages seven to nine, I was a terrible sufferer from inflammatory rheumatism in my legs, followed by "strunous inflammation of the eyes," toddling round for a long time on crutches, and with my eyes protected by green goggles—I mention this fact because I consider that my illnesses were protracted on account of my treatment being conducted in accordance with the prevailing antiphlogistic theory; rheumatism and phlyctenular opthalmia were regarded as "inflammatory," and as all inflammatory diseases were treated "antiphlogistically," I underwent the usual processes of purging, blistering and bleeding, and here on my arms now are five distinct scars from venesection, resorted to at that time.

There are two circumstances which I remember of this time, which, although trivial in themselves, may be of interest.

One day an elderly gentleman, named McLaney, visited my grandfather, having walked around the head of Lake Ontario from the short hills in Pelham, and during the conversation alluded to the commercial value of Gensing, or Ginseng, a plant which grows freely throughout this country. I have a distinct recollection of his stating that it was held in high estimation, as a medicine, amongst the Chinese, and that its cultivation and collection might be a source of profit.

Pereira, in his work on Matera Medica, published in 1842, describes it as the root of the Panax Quingue-folium, and says: "The Chinese physicians ascribe the most improbable and extravagant virtues to Ginseng. They regard it as an invigorating and aphrodisiac agent. At Pekin it is said to have been sometimes worth its weight in gold. In Europe it is believed to possess very little power."

It is a curious fact that, to this day, Ginseng has maintained its singular reputation.

The other circumstance refers to the tomato. I recollect seeing some of these growing in my grandfather's garden. The fruit was smaller than those now grown, and they were regarded merely as curiosities which he called "Love apples," and were not considered to be edible.

Apart from my own personal experiences as a sufferer, to which I have alluded, one of my earliest recollections is of the outbreak of cholera in 1832, which carried off my grandfather, and many other prominent citizens. It was noted at the time that meat underwent rapid putrification. During the epidemic a remedy was in general use, called number six, whose efficiency was supposed to arise from its heating properties, in accordance with a system of medicine called "Thompsonianism," which was extensively embraced in town, and more largely in the country.

One Samuel Thompson had published a book, which I have still in my possession, called "Botanic family physician, and a complete system of practice."

The "system" was beautifully simple. He starts with the proposition that "the component parts of which man is made are the four elements, earth, water, air and fire. The earth and water are the solids, the air and fire are the fluids."

His next proposition is: "Heat is life, cold is death" for, "as death approaches the patient grows cold," and "as soon as life ceases the body becomes cold, which is conclusive evidence that its gaining the victory is the cause of death."

"All diseases arise from the same cause and are to be treated by the same means," and "Disease was a battle between cold and heat."

The remedies he used were all vegetable, as all mineral medicines being "deadly poisons," and some ranked as No's. 1, 2, 3, 4, 5, 6.

No. 1 "To cleanse the stomach, overpower the cold, and promote free perspiration. Emetic Herb Lobelia Inflata."

No. 2 "To retain the internal heat, and cause a free perspiration. Cayenne capsicum."

No. 3. "To scour the stomach, and remove the canker."

No. 4. "Bitters to correct the bile."

No. 5. "Syrup for the dysentery."

No. 6. "Rheumatic drops to remove pain, prevent mortification, and promote a natural heat."

This No. 6 was composed of "high wines or fourth proof brandy, gum myrrh and cayenne," and was therefore specially indicated in such a disease as cholera, where coldness of the whole body was an invariable and prominent symptom. If "promoting heat" could ward off death, No. 6 should have been pre-eminently beneficial, for a teaspoonful, the ordinary dose, made a man feel, from the lips to the stomach, as if he had swallowed so much liquid fire.

Thompsonianism survived for many years, especially in the country districts, and was succeeded by eclecticism which, while discarding the theory of disease as laid down by Thompson, continued the prohibition of everything but vegetable remedies. I am free to confess that eclecticism has conferred a benefit, inasmuch as, unhampered by pharmacopœias, it has investigated the medicinal properties of many vegetable substances, which have proved to be of great benefit in the treatmemt of disease.

Regular Medical Practitioners.

In these early days, York enjoyed the services of several practitioners of great attainments and skill, of whom the Hon. Dr. Widmer was the admitted head.

I have no means of ascertaining the exact date of Dr. Widmer's settlement in York, but it must have been long prior to 1826 for in that year notice was published, in "*The Loyalist*," of his entry into partnership with Dr. Diehl on account of "his extended professional engagements."

Dr. Widmer had had great experience in surgery, having served through the peninsular wars, retiring as staff surgeon in the cavalry.

His portrait, which adorns the office of the General Hospital, was taken in his declining years, and gives but a faint idea of his former energy. His jaunty step and his consummate horsemanship, were the admiration of the town. He was quick and generally correct in his

judgment, skilful with his knife, and beneath an abrupt manner, acquired during the wars, carried a kind and sympathetic heart, ready to succour all, rich and poor alike, by his professional ability. He was frank and fearless, expressing himself in clear, forcible language, often with expletives when he thought the occasion required them.

Naturally he was sought after by the higher official classes, and was appointed an Hon. member of the Executive Council, during the palmy days of the "Family compact."

In his later years he became more liberalized, and thereby offended some of his old friends. It used to be said that on one occasion one of them accused him of ingratitude. "Ingratitude," Widmer replied, "you would all have been in hell long ago had it not been for me."

He was reputed to be an infidel, but I know—for I had most intimate conversations with him for some years before his death in 1858—that he had great respect for consistent Christians. He was greatly shocked at the death of his only son, Christopher Rolph, and paid almost daily visits to his grave in St. James' cemetery, and one day remarked to me: "Richardson, I cannot bear the idea of never seeing my son again."

Another of the prominent physicians and surgeons in my early days was Dr. John Rolph, a member of the Inner Temple, and M.R.C.S., Eng. Profoundly versed in all branches of the medical profession, most polished and courtly in his manner, most dignified in his appearance, and gifted as an orator, he enjoyed high distinction in the teaching and in the practice of his profession.

I make no allusion to his political career, that is not relevant to the subject of this paper.

Next to him came Dr. Morrison, a plain, honest, well educated physician, who endeared himself by his kindness to his many patients, and secured the friendship of all who knew him. He was one of the first mayors when the town of York became the city of Toronto.

Dr. Lang was another general practitioner worthy of mention. He took great interest in the Mechanics' Institute, and the small public library.

Dr. Burnside was a physician who came from New England. He left quite a large bequest to found the Burnside Lying-in Charity, and also to aid Trinity College, who erected a monument to him in St. James' cemetery which informs us that "he was a sincere christian and a faithful member of the Church of England," that "he acquired considerable fortune which, notwithstanding his strict exactness in business, he distributed with a generosity rarely equalled in this community," and finally "he was called (we trust) to a better world." There were some other

doctors—Dr. Tomms, Dr. Diehl, of whom I can only mention their names.

I should not conclude my list of medical practitioners without referring to Mrs. Bennett, the town midwife, whose services were required by very many of the matrons of the town.

Prevalent Diseases.

Of the ordinary diseases of which, of course, Toronto had its share, diarrhœas and dysenteries were much more prevalent, owing, no doubt, to the universal use of cesspools, and defective sanitary arrangements. Influenzas abounded as at present, and were known more than 30 years ago under the name of grippe. Scarlet fever was either of a more virulent type, or else modern methods of treatment are more efficacious, for it produced sad havoc, whole families to my knowledge, being carried off by it.

Of course nothing was known in those days of the germ theory of disease, although, as has been recently shown in this journal, Watson came very near the truth in his lectures delivered in 1830, and as far back as the fifties I was convinced that scarlet fever was due to what I considered to be an animal poison, and adopted a stimulant treatment accordingly.

Erysipelas was deemed an inflammation, and treated antiphlogistically. When headache and coma or mania supervened, it was thought that erysipelatous inflammation had attacked the membrane of the brain, and the depressing treatment was more vigorously pursued. I had an experience in my own case in 1846, when I was attacked by erysipelas of the head, and was treated by Dr., afterwards Sir William, Gull. Purging with mercurials—fever mixtures—shaving the head, etc., etc., with low diet, reduced me so much that I did not recover my strength for months. After my return home in 1847 I actually saw a woman bled for erysipelas. I cannot recall the exact time when my views as to the nature and treatment of erysipelas changed, but I find in my case book, record of the case of a boy aged 9 years, who had erysipelas of the head. "Eyes nearly closed by œdema—redness extending over the scalp which was tender—was very heavy, was roused with difficulty, pulse 58."

The following entry is significant: "I was somewhat alarmed at his state, but determined to treat the erysipelas on my usual plan and to disregard the head symptoms. In taking this course I was guided by the opinion that the disease arose from some depravation of the blood, and that the stupor, headache, vomiting and slow pulse was only

symptons of the disease so arising. I concluded to try and restore the condition of the blood and leave the head symptoms alone," and "ordered

Quino-Disulph. - - - - - - - -	gr. ii
Tinct. Ferri Sesquichl. - - - - -	m.xv.
Aq. - - - - - - - - - -	℥iss

To be taken every 4th hour

"next day was better, all alarming symptons had disappeared." "I saw him but once more; he was then hungry and desirous of getting up. Erysipelas disappearing."

Small pox occasionally occurred, and as we had no isolation hospital, all such patients had to be treated in their homes. Rigid isolation, and free vaccination were effectual in preventing the spread of the disease, and I cannot recall a single instance in which it was communicated to the attendants, or to the members of the family. Until comparatively quite recent years vaccination from arm to arm was universally practised, and I am decidedly of the opinion that the results were more satisfactory than I have seen since it was abolished.

Of course most scrupulous care was exercised. No virus was used except from healthy children of healthy parents, and from vesicles which had run a perfectly typical course; and there was exceedingly little chance of error where the family physician knew the antecedents and the course of the vaccination.

My usual plan was to take the scab and to envelope it in pure white wax, where it would keep active for a long time—but sometimes capillary tubes were used. It is an error to suppose that these are a recent invention. I have in my possession tubes which I used over 40 years ago.

Typhoid fever, or, as it was then called, Gastro-Enterite, was of occasional occurrence. The most serious outbreak of this disease occurred in the sixties. It broke out in the middle one of three rough cast houses, still standing, on the south side of Ann Street west of Church, and spread to the east of Church Street on Carleton and westward a considerable distance on Ann Street. Some thirty persons were attacked, and many died. Drs. Aikens and Augusta and myself had charge of the greater number.

Examination, after some time, revealed that the drain running from the three houses was full of filth and had never been connected with a sewer, but ended in a cul de sac within a few feet of a well from which the neighbours, for some distance around, had been accustomed to draw their drinking water.

Malarial diseases in Toronto are now of rare occurrence, but in those early days they existed in great numbers, especially in the neighborhood of the Don. Agues of various types abounded, but the most serious of all was what was generally termed "Lake fever," because it was worst about the marshy mouths of the several streams emptying into the lake. It was sometimes called Bilious Remittent, from the hepatic congestions which so often accompanied it, but the congestion often attacked other organs, the spleen most frequently, the lungs occasionally. It was a most dreaded disease. These malarial diseases prevailed on account of the extensive marshes in the bay, in the Don, in Ashbridge's Bay, about the mouth of the Humber, and in the lagoons on the Island.

The gradual filling up of marshy ground in the neighborhood of the city, and the straightening of the Don, have almost obliterated the sources of malaria, but, in my judgment, the most important of all was the break through the Island. Originally the Island was continuous with the sandy beach of Ashbridge's Bay, and Privat's Hotel stood near where the eastern entrance now is. In 1854, during a violent eastern gale, a breach was made right through the Island at that place and has remained ever since, although efforts were made between 1854 and 1857 to cause it to fill up. Since then there has been a constant current between the Bay and the Lake, which must have had the effect of purifying the water and eradicating the malarial poison.

In 1847, owing to the exodus from Ireland of its starving, fever stricken people, Toronto, in common with eastern cities, had a terrible experience with typhus fever. Temporary hospitals were erected on the General Hospital grounds, and during the months of July, August and September were crowded with the unfortunate emigrants. The greatest number at any one time was during the week ending August 25th, when 794 were inmates, of whom 84 died.

Two of our most eminent physicians, Drs. Hamilton and Grassett, laid down their lives in their attention to the poor emigrants.

The Asiatic cholera reappeared in 1849 and twice afterwards, carrying off many victims. Every means were employed by the doctors, but without any definite result. Some recovered, contrary to all expectation, while others treated in the same way received no benefit whatever. One fact was clearly established. Several small rivulets ran diagonally from the northwest to empty into the bay, one crossing the College avenue, about opposite Edward street, ran down behind Osgoode Hall crossing Centre, Elizabeth, Teraulay, Louisa and Yonge. Another ran from about the junction of Wellesley and Church, through where the Normal School

now stands, thence across Church street at Gould, and it was noticed that the cholera committed its greatest ravages along the course of these rivulets, especially the first-named. They were nearly dried up, and mostly boarded over, and had in fact become merely open drains, and utilized by the adjoining houses as receptacles of all manner of filth. They have, as the ground became filled up and a system of sewers established, disappeared entirely, and are no longer sources of danger.

During these several epidemics of cholera, the medical profession was indefatigable in their efforts, and employed all kinds of treatment, but in vain. Some recovered, even after all hope had been abandoned, but I do not think any one of us was able to fix upon any treatment as contributing to their recovery, for the same means used in these cases failed entirely in others. Among my notes taken at the time I find one which is very curious, which I may here record.

"Mrs. Nokes, Beverley street, married, middle age, remarkably healthy, 4 or 5 children—

Was attacked while living in an uninfected neighborhood. I noticed however that her next door neighbor was a washerwoman, and that the yard was covered by dirty suds which made the atmosphere very bad at times. She lay for nearly three days in a collapsed state and pulse almost imperceptible, skin cold, even over the cardiac region. She purged in bed, and vomited incessantly, and had the usual cramps.

I ordered 10 grains of quinine immediately, and 2 grs. quinine every half-hour, along with mustard plasters, etc.

She recovered, *and five months afterward was confined of a healthy child.*"

The notes do not say how long the quinine was continued, but as no other treatment is recorded I would infer that it was the only medicine used and was continued at least for some time.

As to the general treatment of disease, when I commenced my practice diseases were classed as sthenic and asthenic. The former required the Antiphlogistic treatment. Bleeding, from 4 or 6 ounces up to syncope, according to the severity of the case. Leeches, cupping, blisters, antimonials, purgatives, diuretics, diaphoretics, and mercurials, even to profuse salivation, were profusely employed, along with "antiphlogistic" diet. Bleeding has been almost entirely discarded for many years, but I venture to say that, in my judgment, a little "bloodletting" might be resorted to in many cases with benefit, and free bloodletting has, in my experience, saved many lives in puerperal eclampsia, and in albuminuria following scarlet fever.

That the value of human life has been steadily increasing, during the past half century, can be demonstrated by the actuaries. That

medical and surgical treatment is unmeasurably in advance of that of the first half of the century is indisputable.

The gradually acquired, but assured conviction that diseases almost invariably arise from defective, and not redecadent vitality, that inflammation, instead of being the cause of disease, is one of nature's means of combatting it. That a vast number, if not the great majority of diseases are due to germs; the daily recognition of substances which exert principal action in restoring defective or deranged function in the various organs; the vast importance of antiseptics and the use of anæsthetics and the various antitoxins, the substitution of the trained nurses for the ignorant, rude and inefficient old-fashioned ones and the advancement in hygiene, have completely revolutionized the practice of medicine and surgery.

While we are not justified in hoping that the day will come when all disease will be eradicated, let us cherish the optimism that as man advances intellectually, morally and socially, he will also advance physically, until disease itself will be shorn of the greater part of its terror.

A CASE OF PLACENTA PRAEVEA.

BY K. C. McILWRAITH, M B. Tor F,O.S. Ed.

MRS. S——. Aet. 37, III Para. 8½ months advanced in pregnancy. Admitted to St. Michael's Hospital.

Patient had noticed nothing unusual about her pregnancy until the previous day, when she had been "moving" and had exerted herself more than usually. Then a severe haemorrhage resulted. When first seen at the hospital she was not much blanched, pulse 88.

On examination the vagina was found full of clots, which were removed, and the os not quite as large as a silver dollar. The edge of the placenta was easily felt coming down to the internal os at the left side, but not crossing it. Labor pains were present, at first slight, but soon increasing in severity. The pulse rate increased to 120 per minute. I now prepared for operative interference by sterilizing my hands and arms with potassium permanganate and sulphurous acid. No blood was appearing externally but there was again a large collection of clots in the vagina. Two courses suggested themselves to me.

(1) To rupture the membranes and trust that the uterine contractions would drive the head down and check the haemorrhage.

(2) To do a Braxton Hicks' version and bring down a leg.

The patient was placed under the influence of aether, and the house-surgeon, Dr. Wainwright, endeavored to press the head down through the brim while I made a vaginal examination. As the head did not come down well I decided that the latter was the safer course. This was easily accomplished. Some haemorrhage took place during the operation, but none afterwards. The patient was allowed to come out of the anaesthetic and the rest of the delivery was accomplished by the natural forces in about an hour's time, the house-surgeon making gentle traction on the leg in the intervals of the pains, in order to control haemorrhage. The child's heart beat for some time after birth, but spontaneous respiration could not be excited. The mother made an uneventful recovery and left the Hospital on the fourteenth day of the puerperium.

One or two points may be noted in this case.

(1) The history was the ordinary history of *accidental* haemorrhage, though the case was one in which haemorrhage was unavoidable. The haemorrhage from a placenta praevia is sometimes brought on in this way.

(2) Special antiseptic precautions: These are necessary in every case of placenta praevia. The patient is usually exsanquinated and absorption is therefore more than usually active, and resistance enfeebled The placental site is closer to the vulvar orifice and therefore more easily infected.

(3) Treatment: Rupture of the membranes sometimes suffices, but we should have some reason for thinking that it will suffice—e.g. strong pains and head coming down well. The plan adopted in this case is usually the safest for the mother Immediate delivery should not be proceeded with on account of the great danger in tearing the cervix and causing serious and even fatal haemorrhage from the unusually enlarged vessels and sinuses in the cervix and lower segment. I have used Champetier de Ribes' bag and found that mechanically it answers perfectly. It controls the haemorrhage, brings on labor, and dilates the cervix without tearing it. It is, however, difficult to keep in order and hard to sterilize.

ALBUMINURIC RETINITIS IN PREGNANCY.

BY W. GORDON M. BYERS, M.D.

Assistant Surgeon Eye and Ear Clinic, Royal Victoria Hospital and Demonstrator in Ophthalmology and Otology, McGill University, Montreal.

THE albuminuric retinitis of pregnancy though ophthalmoscopically indistinguishable from that which occurs in other forms of kidney disease, is marked by certain special features which stamp it as a distinct

clinical entity; and while the condition is one of comparative rarity its occurrence raises always questions of the gravest moment in the treatment of any case of pregnancy in which it occurs as a complication.

The pathological changes present in the retina in these cases unite to form a picture so characteristic that even one moderately proficient in the use of the ophthalmoscope should have no difficulty in recognising the condition. Oedema, which is constantly present, manifests itself in the retina by a characteristic opaqueness of this structure, normally transparent, and in the optic nerve, which is commonly also involved, by slight swelling of the fibres of the papilla with blurring of its outlines. Fatty degeneration and varicose hypertrophy of the nerve fibres are visible as dots or patches of a glistening white color which frequently exhibit a tendency to arrange themselves in lines radiating from the fovea centralis like the spokes of a wheel. Further, there results from the vascular changes dilatation and increased tortuosity of the veins and greater sinuosity of the arteries, accompanied by a marked exaggeration of the central light reflex. Finally, the picture is usually filled in by splashed and flame-shaped hæmorrhages, and always the changes are more marked in the posterior than in the anterior half of the fundus.

My attention was first specially directed to this subject by a case seen years ago in consultation with Dr. Ridley Mackenzie. The patient came from the country in the 8th month of her first pregnancy, complaining of dimness of vision and intense headaches.

Examination of the urine showed a high percentage of albumin with hyaline, granular and blood casts. Ophthalmoscopically, there was present an intense double-sided albuminuric retinitis with numerous hæmorrhages, and the vision on both sides was reduced to the counting of fingers. Interference was advised but refused from religious scruples. The patient was treated by rest in bed and appropriate diet but the condition grew rapidly worse, hæmaturia with almost total blindness and intense headache supervening. Labor came on at the normal time accompanied by eclamptic seizures. Chloroform was administered and a dead child removed with great difficulty by forceps, but the patient died in convulsions within an hour of delivery.

The second case to come under my notice was referred to me by Dr. Garrow, and is of greater interest because of the opportunities for thorough examination, both before and after labor, and for the result obtained.

The patient was a primipara, aet. 26, who early in the 8th month of her pregnancy (about Jan. 1, 1901) had begun to experience dimness of vision and bad headaches, especially severe in the early morning and

accompanied by nausea and vomiting. Flatulence was also present, and, according to the patient, slight œdema of the legs and eyelids, though this was not present at the time of my examination. Shortly after the onset of these symptoms the urine was carefully examined for albumin by Dr. Garrow, but with entirely negative results. The ophthalmoscope showed, at the time of the patient's first visit to me on January 23rd, 1901, a double-sided, blotchy, albuminuric neuro-retinitis, marked by numerous haemorrhages and showing the usual vascular phenomena. The changes in the right fundus were more extensive than those in the left but not so closely confined to the macular area, hence it was easy to account for the great difference in visual acuity, which with correction equalled two-thirds on the right but less than one-tenth of the normal degree on the left side.

Further examination of the urine by Dr. Garrow showed now signs of active nephritis, but interference was rendered unnecessary by spontaneous premature labor occurring on Jan. 27th, the patient being delivered of a dead child by Dr. D. J. Evans.

Five weeks after parturition the patient came back for further examination, looking in good health but complaining still of seeing somewhat poorly. The ophthalmoscopic appearance on the right side was now that of a classical albuminuric retinitis, the ray like appearance being well marked, while on the left side the changes had also subsided greatly, though the muscular area was still the site of numerous glistening opacities. Vision on both sides now equalled nearly two-thirds of the normal. During the following months I was able to observe a gradual clearing up of the ophthalmoscopic changes with a concomitant improvement in the visual acuity.

On November 22nd, 1901, the date of my last note, there existed only slight pallor of the papillæ, moderate sclerosis of the arteries and a few indistinct changes in the macular areas as reminders of the gross lesions previously present, and the vision had risen practically to the normal standard on both sides.

The third case of which I have notes was referred for ophthalmoscopic examination from Dr. Stewart's department at the Royal Victoria Hospital.

In the eighth month of her fourth pregnancy the woman had suffered from very severe uræmic symptoms and dimness of vision. After the birth of her child the sight of her left eye recovered but that of the right remained greatly diminished. Eighteen months later, in the fifth month of her fifth pregnancy, violent uræmic symptoms again appeared and the vision was so reduced that the patient "could barely disting-

uish objects." Premature labor came on at six and a-half months, the sight of the left eye gradually returned but that of the right remained poor as before.

Ophthalmoscopic examination showed marked pallor of the optic discs, central chorio-retinal atrophy and sclerosis of the retinal arteries, much more marked on the right side, where vision equalled only hand movements, than on the left side where it reached nearly two-thirds of the normal.

Albuminuric retinitis in pregnancy, according to recent statistics, occurs about once in every 3,000 cases. The percentage, however, may be still higher than this, for no doubt in a certain number of instances the symptoms are so slight that the attention of the patient and physician is not especially directed to the eyes.

It occurs most frequently in association with those well known local and constitutional conditions which are the outcome of nephritic disturbances brought about by the pregnant state, hence the designation, Retinitis Albuminurica Gravidarum. It may, however, be the result of an acute nephritis occurring independently of the pregnancy which it complicates, or of a chronic renal inflammation unfavorably influenced by child-bearing.

The symptomatology, as outlined by Groenouw, is as follows:— Like the nephritis, this form of retinitis is most commonly met with in primiperæ, and in the last six months of pregnancy, though occasionally it develops only after parturition. The one and only symptom of its presence is dimness of vision. This gradually supervenes through weeks, or even months, and is unaccompanied by any changes in the colour sense or restriction of the field of vision. Total blindness occurs only as the result of uræmic amaurosis, commonly associated with eclamptic seizures, or consecutive to a detachment of the retina, which occasionally develops as a complication of the retinitis. Relapses are prone to occur, as in Case III, as the result of later conceptions, and to bring with them still further reductions in the visual ocuity. Oedema and general manifestations of uræmia are commonly present, but may in exceptional cases be wanting,

The recognition and proper treatment of cases of albuminuric retinitis in pregnancy are matters of the greatest importance. The wise practitioner will treat seriously every complaint of a pregnant woman regarding her sight, and will in every instance make a careful examination of the urine with the usual precautions for the presence of albumen and casts; test the sight of each eye separately with the customary types, and where at all possible ascertain the condition of the patient's eye-grounds.

Once the diagnosis of albuminuric retinitis has been made, the treatment will vary somewhat, according to the character of the kidney trouble with which it is associated. In every case one has to consider the advisability of producing abortion or premature labour in the interests of the sight of the mother. It is well known that in the cases of albuminuric retinitis, secondary to the nephritis proper of pregnancy, vision is restored once the causative factor—the child—has been removed. The outlook, however, is not so bright perhaps as was generally supposed previous to the work of Silex. This observer followed a series of cases during a period of seven years in order to ascertain the final degree of visual acuity in each patient. Of the 26 cases thus observed three only obtained normal vision, and in all of these labour had been prematurely induced. In two more two-thirds vision resulted after allowing pregnancy to go on to full term through a period of four weeks. Of 21 remaining cases in which the retinitis developed in the seventh or the beginning of the eighth month and pregnancy was allowed to go on to full term or only interrupted at a later date:

6	obtained	$\frac{1}{2}$	the	normal	visual	ocuity
2	"	$\frac{1}{3}$	"	"	"	"
2	"	$\frac{1}{4}$	"	"	"	"
1	"	1-5	"	"	"	"
1	"	1-6	"	"	"	"
2	"	1-12	"	"	"	"
2	"	1-18	"	"	"	"
5	"	1-100	"	"	"	"

From these data one sees how severely the vision is damaged in cases of this kind. The physician must early and clearly explain to the patient her serious condition and have a timely decision as to whether the mother prefers to bring a child into the world at the cost of her sight, or sacrifice the child for herself and those dependent on her. The physician can for the most part only place the facts before his patients, but what influence he can bring to bear, should, I think, in the case of poor people, be in favor of interference, as a wife deprived of useful vision is too serious a handicap upon a man in the struggle for existence.

In the cases complicating a chronic nephritis the question is somewhat different. If the retinitis occurs early, abortion is indicated since the chances of the child are slight, and the danger to the sight and life of the mother imminent; but if the retinal inflammation supervenes later on it is justifiable to wait, if a child is earnestly desired, since it is

well-known that in cases of chronic nephritis complicated by albuminuric retinitis the lease of life is not greater than two years.

As was previously pointed out, each new pregnancy is liable to bring about a further diminution in the visible acuity. It is questionable, however, if it is absolutely necessary to advise the mother for all time against fresh conception. Forewarned, the physician could probably with extraordinary care, bring the mother successfully through pregnancy without further damage to the eyes, and indeed cases of the kind have been reported by Alt, Randolph, Axenfeld, and others.

The courses of the retinal detachment in these cases forms an exception to the general rule, recovery not infrequently occurring with the subsidence of the retinitis.

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THE USES AND LIMITATIONS OF THE X-RAYS IN THE TREATMENT OF DISEASES.*

By JOHN McMASTER, M.D., Toronto.

MR. CHAIRMAN AND GENTLEMEN,—I did not, I am sure, expect to see such a congress of medical men at this meeting and I feel indebted to Drs. Carveth and Ferguson for giving me an invitation to be present. I came, however, more to observe your methods and to ascertain what you are doing than to take part in the proceedings. I feel somewhat taken by surprise because I have made no preparation whatever to speak to you in reference to the subject of x-rays. However, I am pleased indeed to have an opportunity to say anything that may aid in extending a knowledge of this wonderful discovery, and whatever I may say must of course be very disconnected owing to the want of preparation.

The greatest use probably of the x-rays is in diagnosing both medical and surgical cases. In surgical cases its advantages cannot be over estimated. Fractures, dislocations, bones and sequestra, the existence of foreign bodies in the tissues, the presence of calculi in the kidney, bladder, etc., deformities of all kinds, aneurisms, effusions in the thoracic cavity,

* An address before the medical staff of the Toronto Western Hospital.

as well as consolidations and displacements of the enclosed viscera are all accurately and concisely exhibited. A great deal of stress has heretofore been laid upon fluoroscopic examinations for the discovery of fractures and dislocations. I must however throw out a word of advice in this respect. Probably too much stress has been laid upon this form of diagnosis. The fl uroscope, while useful in some cases, cannot be depended upon in very many. It is not accurate enough to be relied upon. The proper and the only reliable method in cases of this character, or in diagnosing the presence of foreign bodies in the tissues is the radiograph. This method can emphatically be relied upon. I need not, however, dwell upon this part of the subject because you are all more or less conversant with its workings and its effects.

During the past few years, there has been given a great deal of attention to the therapeutic side of the x-ray subject. There is no doubt a very large field of usefulness for it in this direction. It is, as you are aware, being largely employed in the treatment of malignant neoplasms of all classes and kinds, as well as tubercular lesions affecting the human body. First, let me say something in respect to the latter. It has been abundantly proved that where tubercular trouble affects the surface of the body, the x-radiance produces upon it a marvellous effect. Lupus, which is quite prevalent in our land, is very amenable to its radiance. My experience with this disease has been most satisfactory. With one exception, I believe all cases that I have handled have been restored to perfect health and the result has been most pleasing and satisfactory to the patient. The scars resulting are almost indiscernible and the cicatrices that result are soft and pliable and resemble normal tissue very closely. Other tubercular lesions, such as fistulae, bone necrosis, tubercle in the viscera are favourably influenced by the treatment. Large numbers of fistulae have been reported cured in a very brief space of time. Caries, especially in the lower end of the femar and upper end of the tibia and in the segments of the vertebra, are rapidly improved by exposures to this radiance. The infiltration of the lungs or other viscera by tubrecle are also benefited materially and rapidly by x-radiance. This is certaiinly information that we are very pleased indeed to know, because of the terrible inroads that this disease is making in our land.

The modus-opperandi of the action of the x-rays upon tubercular foci is not yet definitely settled. This much however is known, that it curtails the development of the tubercle, lessening their multipication and aiding in the recuperative processes necessary for the elimination of the active agent. It is not destructive of the tubercle bacilli themselves, that is, it is not a germicide in the ordinary sense of the word, but that

it has the above influences upon these organisms is proven beyond question.

Now permit me to say something in reference to tubercular bone lesions. It has been found that, when the invasion extends to the synovial cavities, or begins in the same, and that the synovial membranes of the joints are affected, the treatment does not produce nearly as favourable results as in those cases where it is confined entirely to the bone, the old form of treatment with emulsions of iodoform and formaline benefit the synovial lesions more markedly than does the x-radiance. The question may be asked: Does x-radiance cure phthsis and other tubercular processes in the viscera? No definite answer to this can be given at present. All that we can probably venture to state at the present is that these cases are markedly benefited by the treatment and many of them symptomatically cured. This in itself is a step and a long step in advance.

You may expect me, probably, so say something in reference to the treatment of malignant growths, especially cancer and sarcona. I have had, during the past three or four years, experience with a considerable number of these terrible maladies. That the x-rays does influence them, some more and some less, for good has been definitely settled. With rodent cancer the results are almost all favourable. I have had but one case that has not responded to the treatment rapidly and effectively. This particular case was complicated with specific trouble, and it has been the experience of others as well as myself that with this complication results are not nearly so favourable. In reference to epithelioma and carcinoma the the results are not nearly so gratifying. While a large percentage of both these conditions respond more or less favourably to the treatment, many of them are unaffected thereby. A superficial epithelioma of very recent occurrence will respond very rapidly in nearly all cases to the radiance, but those that have been treated with plasters or other methods and have extended over a long period of time appear to have required a resistance to the rays that is very difficult to overcome. Carcinomatous conditions of the deep seated structures of the body are helped in nearly all cases, but I fear very much that no permanent cures have been made. In nearly all cases the patient's general condition is improved. They increase in weight and bodily vigour for a time, but afterwards lose ground again. Opiates can be laid aside very soon after beginning x-ray treatment. Where the malignant processes are very extensive and the radiance has to be applied over an extensive area there are dangers attached to the free use of the x-rays. Toxemia of a kind seems to develop in these cases

and may lead rapidly to a fatal termination unless great care be taken to keep the eliminative functions of the body in very active operation. The question may be asked as to the advisability of using the x-rays or advising an operation in cases of malignant condition. My answer to that is, that if the case is operable at all, the proper procedure is, to my mind, to ray them actively for three to five weeks, then operate, and begin raying again after the operation as quickly as possible and continue it until all fear of a return of the disease is past even should this be several months. Operable cases, to my mind, should be urged to take that course.

Not one of the cases that I have treated in this way—and I have treated several of both classes—has up to the present time relapsed. This is the plan pursued by many of the leading operators on the other side. That there is a decided advantage in x-raying before operation is shewn by results. This theory is founded upon what many conceive to be a fact—that dissemination takes place at the time of operation. It is well known that cancers spread by continuity of tissue or along the lymphatics. Just where the cancer cells have reached at the time of operation cannot be ascertained. These cells if not removed by the operation are liable to be disseminated by stimulation during or immediately after the operation and so get beyond the reach of any treatment. Energetic raying before any disturbance of the parts would lessen this risk or remove it altogether. Besides the direct action of the rays upon the growth, the blood supply is lessened through contraction of the capillaries and obliteration of other small vessels.

Again, it may be asked what is the active agent in producing the effects? Is it x-rays or is it the electrical accompaniments of the treatment? Beyond all doubt it is the x-rays and the rays alone that produce the changes. These changes in malignant growths are, I believe, in part as follows, and I have verified them myself in several cases. First, a fatty degeneration is produced in the neoplasm, followed rapidly by the production of an abundance of connective tissue formation. The epithelial cells appear to be transformed into fatty material and a new formation of this connective tissue springs up owing to the stimulation of the x-rays. This is the result we would expect and this is, we are glad to know, what takes place. In this way it is that the cells of the new formation, cancer or tubercle, are gradually destroyed. They are devitalized before the normal cells, as they possess less resistance to the action of the x-rays. When these cells are destroyed, connective tissue takes their place, as they are undergoing absorption.

WHEN IS COLPOCOELIOTOMY ADVISABLE?*

By T. SHAW WEBSTER, M.B.
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MR. President and Gentlemen :—Speaking generally, twenty years ago if a woman had pus-tubes, cystic ovaries, or ectopic gestation, she was said to have pelvic inflammation, cellutitis, or abscess, and the usual treatment was douches, poultices and opium. If intra-peritonial rupture or haemorrhage, supervened, the diagnosis was peritonitis and the same treatment was used, omitting the douches. Sometimes a hap-hazard attempt was made to puncture. through the vagina, if a mass presented there, and fluctuation could be detected.

The advent of the antiseptic methods of Lister, and the aseptic technique of Lawson Tait, who accomplished more than any of his contemporaries by simple washing with soap and water and plain water solutions, were followed by the first great advance of modern operative surgery, abdominal section. It gave opportunities for the study of differential diagnosis and saved many lives, although not without considerable mortality.

The next great advance—vaginal section—bids fair to reduce the rate of fatal endings to a very small percentage, and in cases which are not entirely unsuitable, gives results—immediate and remote—which can not be surpassed in any other line of surgical work. About 85 per cent. of all cases of pelvic disease can be relieved by calpocoeliotomy, and, with ordinary care, it is fraught with no danger to life and with no subsequent discomfort to the patient. Dr. Brooks H. Wells says, "the first vaginal sections for disease of the appendages were made by the late Wm. F. Byford, of Chicago, in the late eighties. But one is seldom a prophet in his own country, and the operation was overlooked and forgotten. Later, it came back with the glamor of a foreign fame, and many surgeons said they would never cut through the abdominal wall for conditions which could be reached through the vagina. When they came to their senses, they found that, while all the conditions *could* be treated by vaginal section, yet the ultimate results were not so satisfactory in all cases as those obtained by the abdominal route." My personal experience affords no example that tends to substantiate his statement regarding "ultimate results." The rest I heartily endorse.

In 1901, Dr. W. R. Pryor published a record of 181 cases, without a death. This year Dr. Martin gave an account of 780 cases, with a mortality of less than 3 per cent. Among these were seventy ovario-

* Read before the Toronto Medical Society, 7th May.

tomies with no deaths, and twenty-eight operations for ectopic gestation, with one death from an accidental cause, There were seventy cases of myomectomy, in some of which the tumor exceeded the size of the foetal head at full term.

The reader of this paper began in 1895, and has performed 47 colpocoeliotomies, without an unfavorable result. All the patients are still living, except one who died of tuberculosis, nine months after operation. At first, the operations were done without the knowledge of the work of others in the same line; but, during the last two years, the author of this paper has been greatly encouraged by the success of Drs. Pryor and Goffe, and by a short term at their clinics last year.

The general term Vaginal Section may be used to include three operations:

I. Posterior colpocoeliotomy—opening the abdomen through the posterior vaginal vault into the pouch of Douglas.

II. Anterior colpocoeilotomy—opening the abdomen through the anterior vaginal vault, between the bladder and the uterus.

III. Lateral colpotomy—a procedure consisting of an extra-peritoneal dissection upward between the folds of the broad-ligament to the under surface of the fallopian tube opening, and draining the same. This is very successful in suitable cases of tubal pregnancy and pyosalpinx, etc. This operation was described in a paper read before the Ontario Medical Association in June, 1901, and published in the *Canadian Journal of Medicine and Surgery* in May, 1902. I am not aware that it has been practiced or described by any other surgeon.

In the case of suspected, or evident, disease in the pelvis, which seems to require operative interference, how can we make, or rectify, the diagnosis best, discover the most vulnerable point of attack, overcome and remove the cause of discomfort with the minimum of suffering, despoliation and death rate, and the least likelihood of subsequent trouble.

The following routine solves this problem:

1. Prepare for aseptic work, bathe the abdomen and vagina.

2. Anaesthetize, examine carefully and, if possible, determine the point of vantage. Determine whether it is better to begin by posterior, lateral, or anterior vaginal incision; or by lateral, or median, abdominal section. The various incisions have been named in the order of choice, if the case permits of a choice of method.

The posterior vaginal section is vastly preferable to any of the others for diagnosis before operation, and for drainage afterwards. Diseased adnexa gravitate into the cul-de-sac, become adherent, and frequently nature, unaided, effects relief by vaginal opening and dis-

charge. Having obeyed the laws of gravity, to the limit of their attachments, the diseased organs are nearer to the vulva than to the anterior abdominal wall; and it is easier to view and handle them from below than from above. There is ample scope for conservative, or radical work, unless the vagina is very small, when it should be dilated.

The time-honored incision in the lima alba is followed by hernia oftener than any other, and for that reason alone ought to be least acceptable.

If examination under anaesthesia does not satisfactorily settle the question of where to begin, open the cul-de-sac, palpate carefully and inspect, using retractors and a good light.

This procedure, harmless to the patient and helpful to the surgeon, requires only a few minutes, and leaves no visible trace of the surgeon's knife. It gives the greatest certainty in diagnosis, without serious operative work. It is less dangerous than passing the uterine sound in diseased conditions, and through it nearly all cases can be successfully treated. But, if it appears impossible to relieve through this opening, another, either vaginal or abdominal, can be made, or the two methods can be combined.

Upon the surgeon is imposed the necessity of thinking for himself He should choose the method he is best able to carry out. It is, to some extent, a personal matter to be decided by the experience, preference and physical qualification of the operator. No surgeon who has very large hands can do vaginal operations well, and the nice discrimation of educated fingers has much to do with correct diagnosis, and the avoidance of traumatism to important structures. Most of all, success depends upon the persistence that does not come off and on a concentration of mind upon a matter that is difficult to acquire.

The most strenuous opponents of vaginal section, as a routine practice, admit that it gives the best results in selected cases; but, to one who becomes expert by practice, it is the operation of election in a very high percentage of pelvic disorders. As a rule, neoplasms that reach above the true pelvis should be cases for abdominal section, but large fibroids and very large cysts can be safely handled from below. At least there can be no serious blunder in beginning that way.

Septic adnexitis, small cystomata, tubal pregnancies, and small fibroids, intramural or pedunculated, should be removed by vaginal incision; and it affords a safer and easy exit for ascitic fluid.

Every case that can be treated from the vagina should be operated upon that way, for the following reasons:

I. Only partial anaesthesia is required;

II. There is less danger of shock;

III. There is no danger from sepsis;

IV. The convalescence is short and smooth, from 7 to 12 days, usually; and

V. There is no external scar, or possibility of ventral hernia, no danger from anaesthesia and shock. A section of the vaginal mucous membrane and the pelvic peritoneum does not make the same impression upon the sympathetic nervous system, as does a severance of the sensitive structures of the anterior abdominal wall. The vagina and pelvis are intended for great awakenings, and do not mind manipulation, thence the economy of chloroform and the absence of shock.

Sepsis.

The pelvic peritoneum stands sepsis well and walls off pus with little danger of general infection. The vaginal mucous membrane does not absorb sepsis to any appreciable extent. If there is a purulent discharge, after vaginal section, it runs down and out without affecting the patient in the least. No sutures are required, and a stitch abscess cannot follow. Therefore, there is little danger of sepsis and no danger from it if it does occur. But if we lift septic organs on the hands that have touched them, through the abdomen and pass them through an incision with margins that do not readily resist sepsis—and the subcutaneous fat is perhaps the most poorly organized, and, therefore, the most easily infected structure in the body—the wonder is that most patients do not die of sepsis in a day or two. The only safe way is to keep the sepsis down where it is innocuous until it is undermined and extirpated.

Convalescence and After Effects.

The light anaesthesia, followed by little or no nausea or vomiting, the absence of shock, the freedom from sepsis, and the knowledge that no horrible life-long scar is left, make the convalescence to the invalid a pleasant incident of short duration. She feels that she is liberated from the thraldom of disease, and is not to be let go on suspended sentence, fearing that the diligent pursuit of her household affairs, or much desired maternity, may be sufficient cause for her reluctant return with a neutral hernia for operation, after which she will be again released under the same conditions as before. She has no ticket-of-leave nor abdominal cicatrix.

As an example of a large ovarian cyst, removed through a very small vagina, the following case is cited:

Mrs. F., age 19 years, weighs 91 1-2 lbs., had been ailing for about a year; at first she noticed pain in right side. Three months later she

detected a tumor in the right inguinal region, which increased until it presented the size and contour of a full time pregnancy. It had been diagnosed uterine febroid, and treated with electricity for eight minutes daily. Slight fluctuation could be felt, and operation was advised by vaginal section if possible. The patient was admitted into the Toronto Western Hospital, and on Oct. 8th, 1902, posterior colpocœliotomy was performed with the assistance of Dr. W T. Wilson and Dr. Carveth, vagina was dilated and the cul-de-sac was opened. The cyst was punctured and evacuated. The adhesions were separated as the cyst was drawn down. Owing to the vagina being filled by the cyst-sac, a section of it was cut off to allow more room. The pedicle was ligated and severed, and the long retractors inserted. An artery, which had passed through an adhesion, was seen to bleed freely, but no difficulty was experienced in tying it with silk. The opening was filled with Mikulicz dressing, which was removed on the 5th day, when it was again packed loosely. This remained for three days more, after which a plain douche was given every day. The cyst contained about four quarts of serous fluid. chocolate-colored and some old blood clots. The specimen is shown with the detached part sewn on.

The patient left the hospital in 19 days; and, three months later weighed 125 lbs., a gain of 33 1-2 lbs.

It is not necessary that every patient with an ovarian cyst should have a loparotomy first, and an ovariotomy afterwards. One operation, ovariotomy, suffices in most cases.

The following case shows that complete anæsthesia is not required for colpocœliotomy, that the abdominal wall need not be relaxed, and also the ease and rapidity of the surgical work in favorable cases.

Mrs. T., age 22 years, married two years, has had one child. During pregnancy had pain in left side of pelvis. She said the pain continued after delivery, and physical exertion increased its severity.

I was called to see the patient on March 17, 1902, and found a cyst on the left side of the pelvis as large as an orange. Operated on March 21, 1902, in the Toronto Western Hospital with the assistance of Dr. Clouse. Dr. W. J. Fletcher administered the anæsthetic.

Dr. Fletcher reported that the patient had marked evidence of disease of the aortic and mitral valves. After careful examination by all concerned, and with the concurrence of the Medical Superintendent of the Western Hospital, Dr. McCullough, it was decided to try vaginal section, posterior opening.

This, I was sure, could be done quickly, but, should an emergency require us to stop, we could dose at any stage of the operation without

disastrous results. The patient received the final cleansing without narcosis. Chloroform was then cautiously administered for five minutes. She was then very pale and her pulse weak, but she still resisted. Ether was then given and, after two minutes, the operation was begun and completed in eight minutes. The whole time of administration of anesthetics was 15 minutes. The narcosis was so light that she was quite conscious in two or three minutes afterwards, and observed my examination of the specimen, so that she was able to describe its shape and size to me the next day. There was no nausea or other unpleasant symptoms. She remained in the hospital 12 days after the operation, and has required no medical attention since. This patient could not have borne an abdominal section.

The following case illustrates the absence of even slight shock, which is explained by the small amount of traumatism as compared with cutting through the anterior abdominal wall. Mrs. R., age 21 years, mother of one child, and was again pregnant. During first pregnancy, had pain in right side, just below McBurney's point. On examination, it was discovered that the pain was due to a thickened right tube, with adhesions; but, as she was not much affected by it, it was considered better to wait until after pregnancy and lactation were completed before operating. The baby had not been weaned, when she suspected herself pregnant again. She said she had the same pain as before when she was pregnant, but more severe. Examination showed the uterus to be as large as at the third month. The tube was larger and more sensitive than when examined before. Her condition was so much worse than in the first pregnancy that vaginal section was proposed.

The fœtus might be destroyed, but a pyosalpinx might rupture during pregnancy or labor, and the women's life be lost, or perhaps both lives sacrificed if nothing were done to relieve the condition immediately. She consented, and walked home 12 days after its removal by vaginal section. She now enjoys remarkable health and is in the seventh month of gestation. At no time was she threatened with post-operative abortion.

Fibromata, interstitial or pedunculated, may be removed "per vaginam." The large ones may be sliced and removed in sections. The pedunculated ones are quite easily managed. The following case of intramural fibroid is offered for consideration: Mrs. McG., age 30 years, has two children, and had one pregnancy removed in the third month, as it was considered (by consulting surgeons) dangerous to allow it to go on to viability, and doubtful if it would continue to that period of gestation. She suffered greatly during this short pregnancy. The removal

of the fibroid by laparotomy had been advised, but was declined absolutely. On Oct. 22nd, 1901, she presented herself for examination, and would consent to vaginal section, if it seemed feasable. Two days later the cul-de-sac was opened, the uterus rotated backwards on its transverse axis, and the fundus drawn down into the vagina. An interstitial fibroid, which had undergone calcareous degeneration, and which extended from the mucosa to the peritoneum, and as large as a full-sized walnut, was excised from the posterior wall of the uterus, the margins of the incision being drawn together by deep silk sectures. There was a good deal of venus oozing, which the sutures did not control. As soon, however, as the uterus was returned to its normal position, and the veins in the broad ligament untwisted, it ceased immediately. The hæmorrhage did not alarm us, for we knew that should it continue for a time it would escape by the vagina and do no harm. If the loss were considerable, we should have positive evidence of it. The next day the patient said she suffered much less than after a trachelorrhaphy, on a former occasion. She was up on the seventh day, left the hospital on the tenth day, and went about shopping, as one who had not been ill. On the night of the twelfth day I saw her standing in a crowded car on the way home from the theatre, when she stated that the jolting did not affect her now as much as before the operation. Her health has been excellent since.

Septic adnexitis, with extensive adhesions of the pelvic organs to each other, and surmounted by a diaphragm of inter-intestinal adhesions, can be relieved from below more easily and safely than from above. Laparotomy requires a most tedious dissection of adhesions in such a case, before the organs to be removed can be reached. Vaginal section brings one in contact with the diseased organs immediately, and the separation of adhesions begins on the under side, where they are easy to divide. When the septic organs, over which the intestines were matted together to shut off the general abdominal cavity from infection, have been removed, the adhesions are soon absorbed. In three or four months, or less, all trace of them disappears. If separated at the time of operation, as they must be in laparotomy, they usually reform, and are more widely spread than before.

The following case, operated on in Dr. Carveth's private Hospital, supports the foregoing statement:

Mrs. P., aged 23 years, married at 21 years of age, and became pregnant in a short time. Miscarriage occurred in the fifth month, followed by a sickness, called by attendants typhoid fever. The chief symptoms were pain in the pelvis, and a purulent discharge from the vagina.

She was confined to bed for six weeks, and was very pale and poorly afterward. Three months after her miscarriage, examination of the blood for Widal reaction, gave a negative result. She was then completely broken down in health. On examination, all her organs were found normal, except those in the pelvis. The true pelvis was filled with an irregular mass, very tender, especially on the sides below. A cordlike tube could be felt extending from McBurney's point to the middle of the mass. This was found at the time of operation to be the adherent appendix.

The usual posterior opening was made and both tubes and ovaries were so extensively diseased as to require removal. The appendix, when separated, appeared normal and was not amputated. Multilocular cysts, made the right ovary as large as an orange. This ovary and the right tube were taken away separately, and were mutilated, so as not to be readily recognized; but one works for the patient, rather than for the pathologist. When both tubes and ovaries are gone, the uterus is of no value to the patient. It is easier to bisect the uterus and remove one-half with its adnexa— and then do the same on the other side, than to leave the uterus "in situ," working around it. But I was asked to remove only what was urgently indicated. The first incision was followed by considerable oozing of blood, which continued till the operation was completed. It was due to inflammatory hyperaemia of the parts divided. Its presence scarcely hindered the operative work at all, as it ran away, only occasionally requiring sponging. Twelve days after operation she spent part of the day in an easy chair, leaving the hospital in three weeks from the date of admission. It is now four months since, and she looks well, declaring that her general health never was better.

The shock and time required to do a laprotomy would have been fatal to one so debilitated. The lifting of the septic organs upward through an abdominal incision would probably have produced general infection. The shock and sepsis together would have undoubtedly caused a fatal issue if done by laparotomy.

The arguments that may be advanced against this method of operating in pelvic diseases, namely, the danger of haemorrhage, the lack of room, the inability to see the field of operation, and the risk of wounding important organs, have already been fully met. These dangers are imaginary rather than real; and, with experience, must continually disappear. As the advantages of the vaginal route becomes more recognized, the number of operations by it will steadily increase, whereas those by the abdominal incision must as surely decrease. The work of Pryor, Goffe, Martin and myself along this line abundantly justifies this statement.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. Mackenzie, B.A., M.B.

CHRONIC ACETANILD POISONING.

The University of Pennsylvania *Medical Bulletin* for February reports a case of chronic acetanild poisoning, in which the patient had taken the drug for some time for the relief of neuralgia. The symptoms on which the diagnosis was made were marked cyanosis with conspicuously little dyspnœa and no coldness of the extremities, suggesting cyanosis due to disorganization of the blood. There was a disfiguring acneous eruption, dilatation of the heart with murmurs, the liver and spleen were enlarged and the patient much debilitated. Examination of the blood revealed marked alterations in the red cells, including such forms as shadow corpuscles, fragmented cells, poikilocytes, polychromatophilic cells, and particularly nucleated corpuscles. The latter were normoblasts and later megaloblasts; there was at first a leucocytosis, and the number of blood placques was increased.

The patient admitted having taken the drug for four or five years in quantities as high at times as thirty grains to a dram.

FIXATION OF STRYCHNINE IN ANIMAL TISSUES.

When only a toxic dose of strychnine is injected into an animal the subsequent characteristic tetanic convulsions cease after a shorter or longer period without leaving any sequelae. Why the spasms should not continue indefinitely has always been a subject of various speculations. One of the earliest was that the strychnine became oxidized, but it has been shown that it can be recovered unchanged in the urine, appearing within a few minutes, and completely in 48 hours. The fact of the fixation of toxins by the animal tissues gave rise to a surmise that alkaloidal poisons could similarly be fixed in an inert form, and the fact that the strychnine seemed to be less active after mixing with animal tissues, *e.g.*, pulp of brain, kidneys, &c., gave support to the theory, but it was discredited by the fact that a similar result was observed when latcum or charcoal was used, showing that the effect was a mechanical interference with absorption.

A further experiment was adduced by Czyhlary and Donath in which an injection was made into the tightly-ligatured leg of a guinea-

pig, and after a time the ligature was removed, when the effect was found to be reduced. The objections to this conclusion are: (*a*) A part of the strychnine has been already absorbed during the period of constriction, and has been partly eliminated; (*b*) the strychnine is absorbed slowly from the ligated extremity on account of the injury to the tissues; (*c*) and because it is there suspended in a colloidal, not a crystalloid solution. These reasons seem sufficient without having recourse to the theory that it is combined.

Carrarra went further, and experimented with nephrectomized animals, on the ground that by rephrectomy the chief avenue of elimination is cut off, and therefore we get a cumulative effect from the poison, and the argument of slowness of absorption cannot be used. This rests on the assumption that nephrectomy leads to a cumulative effect in the absorption of strychnine, a theory disproved by the experiments of Meltzer and Salant reported elsewhere. Further experiments by the investigators confirm the conclusion that strychnine is not necessarily combined in the animal tissues in such a manner as to be rendered inert.

POISONING DURING CHLOROFORM ANAESTHESIA IN THE PRESENCE OF A NAKED GAS-FLAME.

The *Medical Sentinel*, Portland, Ore., January, has an article by Dr. Winslow reporting a case in which during the administration of chloroform for an obstetrical operation, in a small room, where there were three burning gas-jets, the operator and assistants became conscious of a choking, stinging, irritating sensation in the throat and chest, resulting in incessant coughing and gasping for breath, which forced them to desist and open the windows. The operation was concluded under ether.

Although not generally known, the production of irritative effects by chloroform vapor in such conditions, has been frequently pointed out in medical literature. The decomposition which takes place in the presence of the flame has been explained in various ways, but the products, chlorine and hydrochloric acid, are doubtless the noxious agents produced; the chemical change may be represented thus:—

$2\ C\ H\ Cl_3 = C_2 + 2\ Cl_2 + 2\ H\ Cl$ and tests in the form of a filter paper moistened with a solution of potassium iodide and starch showing the iodine reaction, proves the presence of the free chlorine. Any naked flame may give the result. Death has followed in some cases, and severe broncho-pneumonia quite frequently; so that the possibility should be constantly kept in mind where anaesthesia has to be induced in small, badly ventilated rooms.

A CASE OF OSTEOPSATHYROSIS.

In the University of Pennsylvania *Medical Bulletin*, vol. xv., Biggs reports a case which sustained twenty-two fractures in ten years. The patient was a white, family and personal history negative. The disease made its appearance at the age of 20, and peculiarly after an existence of ten years, ceased entirely; at least for the five years that it has been under observation. With the exception of one rib all the fractures occured in the humeri and femora. They were in general the result of causes which would not ordinarily suffice to cause serious injury, and the accompanying pain was very slight and crepitus either absent or very soft. Repair was slow, with a good deal of resulting deformity.

Osteopsathyrosis is a condition of microscopic or macroscopic osteoporosis producing a fragility of osseous structures, resulting in multiple fractures, this fragility being due to brittleness, not pliability. Two distinct forms are described—symptomatic, resulting from general or local pathological conditions; idiopathic, in which a uniform widespread fragility constitutes the primary and sole demonstrable lesion While there is no unity of opinion among authors as to the etiology, there seems to be an increasing tendency to consider this peculiar affection as primarily of nervous origin, so that, for the present, at least, it is very properly classed as one of the neuropathic affections of bone.

The disease is most frequently seen in early childhood, in which cases there is a tendency to spontaneous resolution, but in the adult it is ordinarily terminated only by death. There is some evidence to determine heredity as a causal factor, and cases have been seen apparently traceable to mal-nutrition. The site of predilection for fracture is the femur, and excepting abnormal mobility and interference with function, the classical signs of fracture are absent. As a rule union occurs rapidly and no permanent callus is seen at the site of fracture. There is no curative treatment, other than attending to nutrition, assisting union and avoiding anything that may cause fracture.

THE INFLUENCE OF NEPHRECTOMY UPON ABSORPTION.

The February number of the *Journal for Medical Research* contains the report of an investigation by Meltzer and Salant, conducted at the Rockefeller Institute for Medical Research, to determine the effect of nephrectomy upon absorption.

Edema is generally regarded as being dependent merely on increased transudation of fluid, but one must remember that diminished absorption may be either an additional or determining cause. The study

of absorption in these cases was made by injecting fluid into the peritoneal cavity of rabbits. For each experiment two animals were used, a normal control rabbit and a nephrectomized one, the conditions in each case being as nearly similar as could be achieved. The facts brought out by the experiments were as follows:—

(1) In nephrectomized rabbits the rate of absorption from the peritoneal cavity was found to be more active than under normal conditions.

(2) This increase in absorption was most marked in experiments with solutions of sodium chloride of ½ per cent., which is decidedly hypertonic for normal animals.

(3) In experiments with solutions of 1.5 per cent., or of less concentration, not a single case in nephrectomized rabbits occurred in which there was an increase of the fluid injected into the peritoneal cavity, while in normal rabbits such an occurrence is not infrequent, especially when hypertonic solutions are employed, be they even as slight as one per cent. of sodium chloride.

(4) The increase of absorption in the nephrectomized rabbits continues to be manifest even when the solutions are introduced into the peritoneal cavity about 24 hours after nephrectomy. We have reason, however, to surmise that at about a period of 40 hours or more after the nephrectomy the factor favoring absorption commences to diminish.

(5) When a solution remains in the abdominal cavity five hours or longer the rates of further absorption of this solution seem to become the same for nephrectomized as for normal animals.

(6) In none of the nephrectomized animals was any lymph found on opening the abdomen.

To explain these results the investigators conclude that with the removal of the kidneys the osmotic pressure of the blood becomes increased and to such a degree as to more than counterbalance the effect of the simultaneously increased blood volume which might be the cause of an increase of the power of filtration from the blood into the tissues. Therefore, experiments with nephrectomy do not explain why œdema takes place, though the way may be clearer for further study.

METABOLISM ALBUMINURIA.

The Johns Hopkins Hospital Reports contain the report of an investigation on this subject, from which the following conclusions are drawn:

(1) The percentage of albumen is the best index for the course of a case of albuminuria.

(2) In many chronic cases of albuminuria there is an acute process in progress, and it is this latter which governs the course of the disease. Variations in the course of this acute process are shown by: (a) increase in albumen per cent., (b) slight rises in temperature.

(3) The effect of various diets, therapeutic measures, muscular work, etc., on the albuminuria is often produced by their effect on this acute process.

(4) In governing the diet in nephritis, slight rises in temperature should be taken as evidence that the diet is unsuited to the case.

(5) While the acute process is active, milk is the best diet, not too much and properly diluted. After the acute process has subsided, the patient may even benefit from additions of bread and butter, rice, fruit, or even later, of meat.

(6) If the day and night urines be studied separately, it was found that:

(a) The line of water excretion for the day is practically parallel to that for the night;

(b) The albumen per cent. of day urine is practically always above that of the night.

(c) In the night urine the albumen and nitrogen lines are practically parallel, showing some definite relation between the excretion of these, while the percentage of each varies inversely as the amount of urine to a certain degree.

PRESCRIPTION FOR RHEUMATISM.

In the *Post Graduate*, February, suggests the following prescription for Rheumatism, on the grounds that the the freshly-combined Sodæ Salecylas is more active than the formed salt:

℞ Ac. Salecylas..... ʒiii
Sodæ Bicarb..... ʒii
Pot. Iodidi..... ʒi-iii
Elixir Gaultheriae..... ʒi
Glycerini..... ʒi
Aq. ad..... ʒiv

Sig.
ʒii q. h. ii

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

TOBACCO NERVE DEAFNESS.

Opthalmologists have long known that the excessive use of tobacco produces various degrees of amblyopia through its toxic effects on the optic nerve, but aurists have not apparently noticed the frequency in which this same toxic effect may be found in the auditory nerve. Wyatt Wingrave, in his presidential address to the British Laryngological, Rhinological and Otological Association, January, 1903, (Journal Laryngology, April, 1903) discusses from a clinical standpoint this subject. He was induced to observe the effect of tobacco on his aural patients who complained of deafness, because he had observed the frequent occurrence of deafness in those who suffered from tobacco amblyopia. Deafness, due to tobacco smoking, is divided into three groups according to their etiology: 1, Mechanical or pneumatic; 2, Irritation or catarrhal; 3, Toxic or nerve deafness. The mechanical is due to the negative pressure caused by smoking a tightly packed pipe, especially in those suffering from nasal obstruction.

Irritative or catarrhal, familiar in the early morning cough and expectoration of habitual smokers, is caused by the chemical and mechanical irritation of the smoke on the mucous membrane extending along the eustachian tube and inducing hypertrophic changes in that canal and its connections.

Toxic or nerve deafness is due to the gradual accumulation of certain toxines of tobacco in the system. This poison, whether it be picrotoxine, nicotine or any other, is found in largest amounts in the darkest, strongest and cheap tobaccos. The poison is undoubtedly cumulative, since complete abstinence, not merely reduction in amount, is necessary to improvement. Since he finds marked deficiency in hearing for low tones in 50 per cent. of the cases recorded, he thinks there is some selective degeneration at work in the auditory nerve, as there is in the optic nerve when the papillo-macular fibres are found degenerated, constituting the scotomata. Seventeen cases are recorded, associated with tinnitus vertigo and marked impairment of color sense. Treatment consisted in complete abstinence from tobacco in every form with the administration of strychnia, quinine and bromides. Quinine and bromides, separately or combined, afforded us appreciable effect, but

strychnia pushed to full doses proved more successful. Three severe cases were completely cured in eight, nine and twelve months respectively, nine showed marked improvement, two slightly, and two refused treatment. Several cases relapsed on resuming the habit, though strychnia was continued while the improvement again followed on abstaining from tobacco.

TOXIC RHINITIS.

Grayson in (Trans. Am. Laryn, Rhinol. and Otol. Soc.) writes a very interesting article on this topic. He refers to the common cold in the head, which he believes to be due to a faulty blood state induced by indiscrete eating. He says the influence of the weather has little to do with the disease, and he believes changes of temperature do no more than hasten what would, in all probability, occur but a little later without their assistance. Treatment is first correction of diet, with vigorous exercise. The seductive little "Rhinitis" and "Coryza" tablets have accomplished, he thinks, more harm than good, as the rhinorrhea is only a symptom of the underlying disease. Speaking of drugs, he says: "If we except those that may be used to empty and cleanse the gastro-intestinal tract, there are none that compare in remedial value to vigorous exercise. A half hour with the foils or gloves, a ten mile ride on a hard trotting horse, followed by a cold shower and a hard rub, will do more to arrest and subdue an auto-toxic rhinitis than the cleverest combination of diaphoretics or anti-lithics. The energizing effect of such work upon the general circulation, the vaso-motor apparatus, and the whole mechanism of exertion will afford prompt relief, while remaining indoors and being coddled will only retard the elimination of the offending toxines."

THE TREATMENT OF NON-PARALYTIC STRABISMUS INCLUDING A NEW OPERATIVE PROCEDURE.

J. H. Woodward (*New York Medical Journal*, January 24, 1903), has a very practical paper on this topic. The object of any treatment in squint is three-fold, namely: (1) To remove deformity; (2) to establish normal association of movement between the eyes; and (3) to reclaim the deviating eyes from amblyopia. Woodward believes failures in operative measures are especially due to the free division of the over acting muscle so universally practiced. His experience leads him to believe that stretching the over acting muscle, weakening or paralyzing it temporarily, previous to advancing the antagonistic, materially aids

one's endeavors to eliminate tenotomy from the treatment of strabismus. He thinks treatment of squint should begin immediately upon its first manifestation, and operative measures undertaken only as soon as it is clear that other means of cure have failed. Stereoscopic, prismatic and reading exercises and careful supervision of the refraction should be continued until the cure is completely established. Efforts to revive vision in an amblyopic eye should be persisted in for several years, notwithstanding the seeming hopelessness of the task.

RECURRING TONSILLITIS.

Donovan in *The Detroit Medical Journal*, January, 1903, writes on this very common disease. He draws attention to the fact that it is not necessary for the gland to be enlarged to be diseased. The symptoms indicative of diseased tonsils are usually :—cough, especially on retiring, (this may often be produced by pushing the probe point into the diseased crypt), uncomfortable deglutition, impared hearing, smell and taste, subjective sensations in the throat, pains, glandular enlargement, voice changes and easily exhausted, otitis, neuralgia, etc. Various constitutional diseases due to infective organism, Donovan believes, have for the organism's port of entry, the faucial tonsil. The treatment is medicinal, before suppuration has occurred, and surgical when pus is present. Calomel and soda phosphate for their eliminating effects are first given, while benzoate of soda, salicylates, guaiacol, etc. have their indications. Locally, silver nitrate 40 per cent. or 50 per cent. guaiacol solution will occasionally abort the attack. When suppuration has taken place no delay should occur before opening into the *supra-tonsillar space.* In some cases where the tonsil only projects beyond the pillars during an acute attack, one is justified in removing it then and taking as much away as possible. The case very rapidly gets better on evacuation of the pus, but recurrence is very liable to take place if there be any diseased tonsillar tissue remaining, therefore complete dissection of the gland is indicated. Pynchon strongly insists that the cautery is by far the best means. Donovan as a rule in adults favors complete removal, and quotes J. H. Coulter as justifying such procedure. Coulter says of tonsillectomy : (1) It gives a cosmetically perfect throat, free from liability to absorb toxines, etc. (2) Liberates and gives perfect action. (3) Removes mechanical obstruction to sound waves. (4) Relieves reflex disturbances. (5) Leaves perfectly smooth surfaces. (6) If pillars are previously hypertrophied they become normal.

HEADACHE OF NASAL ORIGIN.

Morean Brown, in the *Medical Brief*, Nov., 1902, draws attention to the frequency with which headaches are due to nasal lesions. Septal deflections, which are so common, not infrequently produce headache owing to the accompanying nasal stenosis and catarrh. Ethmoidal suppuration causes pain over the bridge of the nose and about the angle of the orbit. Sphenoidal disease is usually accompanied by occipital pain, while frontal sinusitis causes pain on the forehead. Adenoids, hypertrophy of the epi-turbinates and polypi may all be a cause of headache. In fact, the morning headaches of children are nearly always due to nasal or naso-pharyagral catarrh. It has become almost a fashion now-a-days for patients to prescribe for themselves or have ordered for them acetanelid or antipyrine combinations for all cephalgias whether the headaches are of renal, digestive, circulatory or ocular origin. A more careful study of each individual case would lead to more rational therapeutics.

THE TREATMENT OF ACUTE SUPPURATION OF THE MIDDLE EAR.

W. P. Phillips (*Medical News*, January 17, 1903), arrives at the following conclusions in dealing with cases of acute suppurative middle-ear disease. (1) Early and free drainage is essential; (2) rest in bed should be prescribed until acute symptoms have passed off; (3) purgatives (calomel) should be given; (4) pus should be microscopically examined; local treatment in the main consists in cleanliness and free drainage; (6) any prolonged attempts to abort suppuration within the mastoid cells is to be condemned; (7) early operative interference in mastoid suppuration prevents more serious complications, and tends to preserve the hearing power; (8) uncomplicated cases usually recover in from two days to three weeks.

RETINAL HÆMORRHAGES IN FRACTURE OF THE SKULL.

Dr. R. A. Fleming, writing in the April number of the *Edinburgh Medical Journal*, states that he found, on examining the eyes of persons who had died of fracture of the base of the skull, where there had been a great amount of sub-arachnoid hæmorrhage, that retinal hæmorrhages were common—in fact, might be said to be the rule. It was noted that where the sub-arachnoid hæmorrhage was unilateral, the retinal hæmorrhages were generally limited to the same side. The hæmorrhages in the retina were usually massive, irregular, and situated at some distance from the optic disc.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

The campaign against tuberculosis is being carried on vigorously in Montreal, the most recent move being in conjunction with the Ministerial Association of the city. The clergy of the Protestant churches of Montreal, acting largely through this body, in co-operation with the League for the Prevention of Tuberculosis, have set apart the evening of Sunday, May 17th, for short lectures upon tuberculosis, its frequency in the community, the possibility of lessening its spread and so of improving the general health, and the duty of each individual in reducing the ravages of the disease. Dr. Adami, the convenor of the committee, has received a splendid response from the various churches and medical men of the city, and everything points to a large number of successful gatherings.

The Montreal Medical Society took up the same subject at the May meetings for discussion among the members, and a record attendance greeted Dr. Kinghorn, of Saranac Lake, who had been invited to speak on some of the more recent methods for the diagnosis of tuberculosis. Dr. Kinghorn's paper was excellent, and much appreciated by those present. The subject matter was admirably chosen and each heading received attention in proportion to its importance. He spoke in detail of the early signs of tuberculosis, physical examination, sputum, the x-rays, the agglutination test, and tuberculin. In the first place Dr. Kinghorn insisted that an accurate history should be obtained, and special attention should be paid to certain symptoms, for although the modes of onset were many and various, yet of particular moment were, cough for more than six weeks, temperature rising every day above 99½°, pain in the chest, hæmoptysis, dyspepsia, and loss of weight. Physical examination was without doubt the important diagnostic method; nothing could replace it, and nothing should replace it. Too much stress could not be laid upon complete, careful, systematic, physical examination in every case that was in the least degree suggestive of tuberculosis. The various methods of sputum examination were gone into at length, and the importance of frequent and thorough examination insisted upon. X-ray examination had proved of little value in his experience, and it was not until physical signs could be detected that anything approaching definite results could be obtained. The agglutin-

ation test had been given a moderate trial, but as a means of detecting early cases it was unsatisfactory. The tuberculin test was of great value in cases where every other test was negative. It was seldom necessary to apply it, but it was harmless when properly and carefully administered. The dose varied from 1-10 to 10 mgms, and if a reaction could not be obtained with the latter, tuberculosis could with great confidence be excluded.

Dr. Kinghorn sat down, amid great applause, and Dr. Lafleur opened the discussion. He was glad that Dr. Kinghorn had so insisted upon proper physical examination. In almost all of the cases referred to him, there was little difficulty in demonstrating the lesion, and it was simply carelessness upon the part of the medical man that the condition was overlooked. Imperfect stripping of the patient and hurried examination were in his experience responsible for the majority of mistakes. In regard to the x-rays, he had had but a moderate experience, but when any lesion was evident by this method, he had been able to demonstrate it by physical examination. Dr. Girdwood rose to say a few words on the x-rays. He thought that the reason so little was seen by the majority was because their eyes were not educated to see properly in the dark. A person should stay for ten or twenty minutes in the dark room before attempting to get results with a fluoriscope. The diminution of the excursion of the diaphragm was certainly the most important sign. Dr. Blackadder asked for help in the diagnosis of early tuberculosis of children. Often the peribronchial glands were involved long before the lungs, whether this was owing to the increased gland activity in young people, or not, he was unable to say. Dr. Nichol's remarks were particularly to the point in regard to the agglutination test. He had carried on experiments in agglutination, and found results corresponding to those of the original French observers. He found also that in the staining of the bacillus that Gabbett's method was utterly unreliable, and he invariably used the acid and alcohol method when doing anything but the merest routine work. Dr. Richer spoke on tuberculin, and strongly advised its use. He had used it a comparatively large number of times, and never had an ill result. He never had any hesitation in testing his patients with it when there was a question as to the diagnosis, and he had used it upon himself six times. Dr. Shepherd said that in surgical conditions the tuberculin test was of great value, but that he had found it useless in tubercular peritonitis, and all the cases of gonorrhœal rheumatism, in which he had tried it, reacted in a typical manner. Dr. Shepherd then moved a vote of thanks to Dr. Kinghorn, and said that it would repay any of the members who had not visited Saranac to do so, in order that they might appreciate the

scientific way in which the work was conducted, from the sanatorium proper to the laboratories connected with it. Dr. Kinghorn replied, answering questions which had been put to him during the discussion, and giving a cordial invitation to the members who might wish to visit Saranac.

Dr. J. Alex. Hutchison presented a living case of aneurism of the brachial artery treated by digital compression. The history of the case was rather curious, inasmuch as there was no evidence of alcoholism or syphilis, and trauma appeared to be out of the question. The swelling was rapid in its onset and presented all the typical signs of aneurism. The expansile nature of the tumor was easily demonstrated and the pulse of the radial and ulnar arteries was felt with difficulty. There was some numbness of the forearm and the power of flexion of the fingers was considerably diminished. The aneurism was situated at, or close to the division of the brachial artery, just below the elbow joint. Digital compression was carried on by relays of students for 30 hours, for the patient would not hear of operation. At the end of 18 hours the mass had lost its expansile character and only a slight pulsation was left, probably due to some large anastomotic branch. However, to make sure, compression was continued to the end of thirty hours, when, as the slight pulsation was still present, an old-fashioned turniquet was placed over the tumor and left on for 30 hours longer. The recovery was uneventful, although the pulsation above referred to had not disappeared.

Dr. Hutchinson also showed a case of compound fracture of the femur, followed by embolism of both tibial arteries and gangrene of the leg. The patient, who had been employed in a machine shop, had been carried on the back of a fellow-workman for fully a quarter of a mile before he was allowed to rest, and undoubtedly to this was due in great part the injury of the artery. The gangrene which followed was most typical, in onset, course and result, while the appearance was so classical that it might well have adorned the pages of a text-book on surgery. Amputation was successful. The main lesson to be learned from this case was, that all large establishments in which accidents of a similar nature might occur should have at least a stretcher, to be used in such an emergency, and if no provision of this kind had been made, the employees should be given instructions to move the patient as little as possible until ambulance aid arrived.

The third case presented was that of epithelioma of the lower lip, with plastic operation. Here, practically, the whole of the lip was removed and a V-shaped incision made, extending far down the neck. The simplest procedure possible was followed, namely, to loosen the subcutaneous tissues well back and then approximate the edges. The result was particularly good.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

HALIFAX BRANCH, BRITISH MEDICAL ASSOCIATION.

Meetings of this branch were held every fortnight during the past winter. The last meeting of the season took place on April 16th. Since writing we have had papers by Drs. C. Dickie Murray and J. G. MacDougall and by the late Dr. Halliday.

There was also a Pathological meeting at the medical college and a clinical meeting at the hospital. Dr. Murray's paper on "The State and Tubercular Disease" appeared in the last copy of The Canada Lancet.

Dr. MacDougall's paper was on Cardiac Disease with special reference to diagnosis and treatment. The paper was carefully prepared and was listened to with close attention by all present.

Dr. Halliday's paper was on Sanitoria. Owing to his absence through ill health Dr. G. M. Campbell read it for him. Dr. Halliday referred more particularly to the Sanitorium at Gravenhurst where he had spent several months. He gave a bird's eye view of the country in which the sanitorium is placed and compared it with the neighborhood about Kentville—the proposed site of our provincial sanitorium. Dr. Halliday then described the buildings in detail—photographs of these being handed around. The shacks were minutely described. Dr. Halliday stated that the patients lived in these all the year and indeed preferred them to the houses.

The hospital management received due consideration.

Treatment was dealt with under two heads, medicinal and non-medicinal, the former playing the less important part.

The importance of institutional treatment in cases of pulmonary tuberculosis, and the benefit derived from the courses of lectures, discip. line, etc., in such places was strongly emphasized.

The paper finished with statistics with reference to cures at this institution.

Dr. John Stewart followed with some remarks in reference to the proposed Kentville Sanitorium. He also spoke of Hopewell, in Picton county, and the hills surrounding the Wentworth Valley, as ideal situations for sanatoria.

Dr. Hattie dealt with tuberculosis among the insane, and spoke of the difficulty of proper disposal of the sputum in these cases.

He referred to the experiment lately undertaken in the Manhatten State Hospital, and showed that wonderful improvement had been made in dealing with the tubercular insane, even under somewhat adverse circumstances.

At the pathological meeting, held on February 4th, Dr. G. M. Campbell reported a case of pyemia in a boy of eight. The kidneys, spleen, and liver, which were exhibited, showed multiple abscesses throughout. The mitral valves showed signs of ulceratire endocardites. Attached to one cusp was a septic clot—the cause of the condition. Two areas of degeneration were seen in the brain, the one on the left side being in the region of the posteri or cerebral artery, and the one on the right was more anterior, and in the region of the middle cerebral.

The patient during his illness complained only of headache.

The next case referred to by Dr. Campbell was one of a rapidly recurring ascites. The patient had been tapped some fifteen times but filled up again always in a day or two. The patient was finally operated upon and the omentum attached to the parietal peritoneum. A stitch abscess followed.

The operation was done on October 25th and on November 25th it was found necessary to tap her again. The trochar wound became septic. She died some days after this from septic peritonitis and the p. m. revealed the following condition.

Omentum found attached to parietal peritoneum Intestines were all matted together by adhesions, which were becoming fibrous, liver friable, adherent above to diaphgram and below attached by adhesions to intestines. Pockets of pus were found between intestines. The general cavity was found filled with ascitic fluid. Spleen weighed 1¾ pounds, liver small, capsule thickened. The vena cava was widened and baggy, particularly at the entrance of the renal veins. Both pleural cavities and pericardium were filled with ascitic fluid. The left lung was collapsed; the right emphysematous.

Dr. Campbell followed with remarks on the conditions serositis and multiple serositis, and referred to an article on the subject lately published in the *American Journal of the Medical Sciences.*

Dr. L. M. Murray then referred to two recent cases in the V. G. H. These were men suffering from enlarged prostate.

Dr. Murray discussed fully the anatomy of the prostate—the varieties of enlargement—the time of its occurrence and its causation. He then dealt with obstruction of the lower urinary tract, due to the enlargement, and entered fully in the train of events leading to the pathological

condition known as surgical kidney. Dr. Murray showed a number of sections under the microscope.

At the meeting of March 18th Dr. John Stewart read a paper on Hospital Notes With regard to post graduate work Dr. Stewart thought that his alma mater Edinburgh presented the most attractions —one of the chief advantages being that all the hospitals are together. He then spoke of the teachers and the under graduate course when he was a student. He thought that the ordinary mind of man would soon be unable to undertake all the subjects which are coming up in medical education.

He then spoke of London, its advantages as a medical centre, and gave a detailed account of an afternoon's work with Prof. Cheyne, which included the following operations—wiring a patella—operation for genu valgum—tubercular bursitis—sinus of thigh—fistula in ano. Outside of London Dr. Stewart thought the Leeds Hospital at Bradford gave the best out-patient work. The children's hospital at Bradford has many advantages.

Speaking of continental hospitals, Dr. Stewart referred to Hamburg and the specially good advantages offered there to post graduates. Berne offered special attractions to surgeons, owing to the presence of Kocher there. The expenses for three months at Edinburgh, including passage money, would be about $300.

Dr. Hawkins asked if any instruction on the continent was given in English.

Dr. Stewart, in reply, said that there was none, but that the operations and black-board demonstrations were quite enough for an Englishman. Hotel and railway porters all understood English. House surgeons are kind to visitors, and are anxious to learn English.

At a meeting held on January 12th Dr. H. M. Hare brought to the notice of the meeting the fact that some druggists in Halifax habitually prescribe for patients over the counter, and instanced a case where a patient suffering from chancroid had been cauterized by a druggist. Dr. Ross referred to a case where substitution had been detected.

Drs. Hare, Ross and L. M. Murray were appointed a committee to draw up a resolution with reference to counter prescribing and irregularities in filling prescriptions—the same to be forwarded to the Nova Scotia Pharmaceutical Association.

VICTORIA GENERAL HOSPITAL, HALIFAX, N. S.

At the recent competitive examination, the following gentlemen were appointed members of the house staff for the ensuing year: Kenneth A. Mackenzie, M.D. (Dal.), George W. Whitman, M.D. (Dal.), Jacob L. Potter, M.D. (Dal.), and Frederick Lessel, M.D. (Dal.)

James R. Corston, B.A., M.D., who was on the staff during the past year, has been appointed Senior House Surgeon. These gentlemen enter upon their duties June 1st. The other members of last year's staff are Drs Borden and Watson, who go to Britain for post graduate work; Dr. Millar, who will practice in Amherst, and Dr. Campbell, who will practice in Halifax.

HALIFAX MEDICAL COLLEGE.

The annual meeting took place Tuesday, May 12th. Dr. M. A. Curry was re-elected president of the college, and Dr. N. F. Cunningham, vice-president. Matters affecting the welfare of the college were discussed and the following appointments to the teaching staff were made: To be lecturer in Medical Jurisprudence, E. V. Hogan, M.D; to be lecturer in applied Anatomy, T. J. F. Murphy, M.D.; to be demonstrator in Histology, D. G. J. Campbell, M.D.; to be demonstrator in Anatomy, W D. Forrest, M.D.; to be class instructor in Pathology and Bacteriology Dr. L. M. Murray.

DALHOUSIE COLLEGE AND UNIVERSITY.

At the annual convocation of Dalhousie University, held on April 28th, the following ladies and gentlemen received the degree of M.D., C.M: Miss Minna May Austen, M. A., (Dal.) Halifax; Lester Brehaut, Murray Harbour, P.E.I.; Mellville Coffin, Savage Harbour, P.E.I.; D. M. Crawford, Wood's Island, P.E.I.; R. W. L. Earle, Hampton, N. B.; T. R. Ford, Milton, N.S; H. D. Hawbolt, Chester, N.S.; W. A. Lawson, Wallace, N. S.; F. Lessel, Halifax; K. McCuish, St. Peters, C.B.; J. A. McIver, Victoria, C. B.; K. A. McKenzie, Springhill, N. S.; A C. McLeod, Milton, N. S.; J. C. Morrison, Englishtown, C. B.; D. Murray, Meadowville, Picton: E. M. Norwood, Chester, N.S.; J. L. Potter, Canning, N.S.; Miss G. E. B. Rice, B.A., (Dal.) Weymouth, N.S.; G. W. Whitman, Guysboro, N.S.; F. V. Woodbury, Halifax.

The Medical Faculty Gold Medal for highest standing in all subjects of the third and fourth years was awarded to Mr. K. A. MacKenzie, of Springhill.

The medal awarded by Dr. A. W. H. Lindsay for the student standing highest in the primary subjects was captured by Mr. V. N. MacKay, of Earltown, N. S.

Mr. John Rankine, B. A., was awarded the Simpson prize for the student doing best in chemistry and Materia Medica.

MEDICAL COUNCIL OF NOVA SCOTIA.

Previous to this year gentlemen, who had studied medicine for four years and had received a diploma from a recognized College or University, could, upon payment of the necessary fee, have their names placed on the medical register of the province. Several winters ago an act was passed by the Provincial Parliament, making it compulsory for any one wishing to practice in Nova Scotia to appear before an examining board of the Medical Council and pass an examination before being registered. The act came into force for the first time this year. The examinations are to be held twice a year, spring and autumn.

The first examination under the new act took place the beginning of May. Fifteen gentlemen and two young ladies were successful in passing the examinations and are entitled to certificates enabling them to practice in Nova Scotia and Cape Breton.

LETTER OF CONDOLENCE TO MRS. HALLIDAY.

At the last meeting of the Nova Scotia Branch of the British Medical Association, held in Halifax, it was unanimously resolved that we should communicate to you the expression of our deep sympathy in your great sorrow.

The sad bereavement which has deprived you of your life's companion has also taken from us one of our most active and useful members.

In the many interesting contributions which Dr. Halliday made to our Association, and which were almost always the result of original investigation, we felt the influence of an earnest and scientific mind, and we shall certainly miss the stimulus of his presence and help in our discussions. We consider that the work he accomplished as Director of the Government Laboratory of Hygiene has been of the greatest value. And those who knew him best feel that his early death is a loss to the profession and to the country.

Please accept for yourself and for your little son the assurance of our heartfelt sympathy.

C. Dickie Murray, M.B., (Edin.) has been appointed medical advisor to the United States Treasury department at Halifax.

Dr. L. M. Murray has been appointed Provincial Bacteriologist to fill the position made vacant by the death of Dr. Halliday.

MEDICAL SOCIETIES AND GATHERINGS.

TORONTO MEDICAL SOCIETY.

Regular Meeting, April 16th, the President, Dr. Hay, in the chair :—

Dr. Hay reported a case in practise. Mrs. C., aged 30, married 13 years, with 4 children, last pregnancy 3 and a half years ago. For the last 8 years she has felt poorly, and complained of something preventing her having a movement of the bowels. Water injected high remained or else dribbled slowly away. Walking and kneading of the bowels might cause an evacuation. The enema gave great discomfort. Was operated on a year ago for this, and a uterine suspension done, but no relief followed. With her finger in the rectum she said she could feel the fæces, but there was something between and they could not get away. He had operated and found that the meso-colon had stretched and the descending colon formed an Strap. He had Dr. Cullen, of Baltimore do the operating, and had the bowel stitched to the abdominal wall, by mattress sutures. Dr. Cullen said that one could not promise much positive results in such a case, but there was likely to be much improvement.

Dr. Cullen gave a short talk on sarcomatous change in uterine myomata. He said that with increased knowledge the wisest course was to operate. In 11 years they had records of 1,000 cases, and had found coincident sarcoma in the uterus which had not been suspected. He showed the Society a large collection of cuts and photogravures of myomatous uteri, showing transformation into sarcoma, some direct from muscle fibres, small tumors, nodules that on section were found to be smooth, homogeneous tissue. He showed altogether 50.

Mr. Silverthorne said that these illustrations were a treat in the microscopic line. The one with hyaline degeneration in the myoma is especially beautiful. He would like to move a hearty vote of thanks to Dr. Cullen. Dr. Bryans seconded this.

Dr. Hay reported a case, a young lady, 19, who had a simple cyst of the ovary, removed in the country by a doctor, and a fistula had remained. Then she came to Toronto and had that operated upon with the result that it remained and there was added a faecal fistula. He had operated with Dr. Cullen and they had found a bi-cornuate uterus, and 4 points of opening in the bowel which they stitched, Dr. Cullen said that they had removed the fistulous tract. He advised making the incision to one side and coming down on the fistula from within. He related

a case of uterine suspension done by a colored doctor, where a fistulous tract had remained, and he had had the mortification of removing a gauze pad before the doctor's eyes. Dr. Doolittle said that he had seen a good deal of the methods and hospital appointment in England. He gave an interesting description of both.

Dr. Bryans opened the discussion on pneumonia by relating the histories of 11 cases with 4 deaths. 1st death—Young man, healthy up to attack, on Saturday night, Dec. 23, he felt cold going home, on Monday he was at work again, till 4 p.m., when he went home to bed. His temp. 102, pulse poor and small, no very sharp pain, intellect dull, was given small doses of phenacitine, digitalis and strychnia, poultice to the chest with plenty ventilation. Wednesday he was still very ill, pulse worse, respiration 36. He was sinking fast. His pulse rose to 160 before he died. The sputum was typical. He had not tried anti-pneumococcic serum nor saline injection. 2nd death :—A man, aet 40, poor health, had a pain in the right side, temp. 104.5, pulse 120, sputum prune juice, severe pain in the chest, for which he gave morphia hypodermically, gr. 1 64, and bandaged the chest. Cyanosis developed, digitatis and strychnia were given as required, and a mild expectorant. The bowels were kept open and the chest was poulticed. He took nourishment well. For the high temperature he tried cold baths at 50 F., rubbing well. This brought down the temperature and the patient became conscious. He died on the eighth day. 3rd death :—Boy 7 years, seen the second day of the disease, was very ill from the start, empyæma developed, and the pus was drained for six weeks when he died.

Dr. McPhedran said that the treatment was symptomatic at best. It is an infective disease with local expression. The condition of lung is not an indication of the condition of the patient. Those with low temperature have usually a bad prognosis, the toxemia being more marked. Anti-pneumococcic serum has given fair results, but more than nursing is not required in most cases. The naso pharynx should be kept clean, the jacket was not much use, moderate cold to the chest did good at times, it stimulated the respiration in most cases, and the heart and circulation. He had not used the cold bath. Venesection was useful where indicated, with the right heart dilated and cyanosis present. Strychnia in his hands had given no results, while digitalis had given some good results, and had been of no benefit in others. Quinine sulphate, grains vi. in water, given subcutaneously, had given him excellent results, he had never given more than three injections. Dr. Ferguson said that Sir William Gull's warm bed, good nurse, light diet axiom was still in full force. He concurred in what Dr. McPhedran had

said about venesection. Pneumonia was a general disease with local manifestations, usually in the lung. He gave morphia for the pain. Oxygen had been used in some cases with much benefit. Dr. Wilson was opposed to bleeding. Cases must be classified. Those over 45 years, and in the habit of taking liquor, were bad subjects, and could not be treated on the expectant plan. Dr. Hooper asked if it was possible to dilate the peripheral circulation and thereby alter the lung condition? Dr. Webster said that no mention had been made of aconite, which had always given good results in his hands. Those cases which had been placed in the open air got well faster than those left inside. Dr. Galloway said that he had seen the good effect of the cold bath in his own family. With respiration 90 to 120 and a temperature just under 106, the bath at 70 F., with cold added, till the temperature of the patient fell to 100, had worked exceeding well in his own house. Dr. A. Fletcher said that the use of creasotal had been tried by him in 11 cases with one death—that of a child of 8 days at death. In all the other cases there had been no crisis, but the temperature had begun to go down, inside of ten hours, after the treatment had been begun and had ended by lysis.

Regular meeting, May 7th, 1903. The President Dr. Hay was in the chair.

Dr. T. S Webster read a paper entitled "When is Colpocoeliotomy advisable?" Dr. W. McKeown opened the discussion. He said that the method of operation was good in selected cases, but that the bleeding, which might be severe, was very hard to control, the operator was at work in the dark and it was necessary to see as well as to feel what one was doing. Dr. Wilson said that Dr. Webster had so educated his fingers that he could feel what many another would not recognize. Dr. McDonald said that he had tried vaginal section years ago, and had given it up because better work could be done through the abdomen. Still, in a few carefully selected cases, he would open through the cul-de-sac.

Dr. McIlwraith read the notes of some cases of antepartum haemorrhage. In the first, accidental, in the seventh month, the cause was a hemorrhoidal condition of the veins of the vulva. In the second, also accidental, there was a varicose condition of the veins of the vulva and vagina, and the haemorrhage was found to be from a dilated vein of the cervix. In the third case, in the fifth month, the haemorrhage was severe and continuous. The cervix was found to be congested, the os eroded, there was free bleeding from the wounds of the vulsellum. The condition was either malignant, or endocervicitis, astringents were

used. She aborted and then the cervis got better. The fourth case was one of placenta praevia, the placenta being on the left side. The fifth case was accidental. There was no haemorrhage at the time he had seen her, but there were marked evidences of it. In this case a verson was done by the Braxton-Hicks method. The sixth case was at the 7th month, with haemorrhage at times. In the interval there was a greenish discharge. The patient was convalescing from appendicitis and pneumonia. The child was alive but she miscarried. The seventh case was at the same time, 7th month, the discharge was slight and was treated on the expectant plan. Eighth case. The diagnosis in this case lay between ruptured ectopic, or accidental haemorrhage, which latter it proved to be.

Dr. Ashton Fletcher opened the discussion. He said the cases reported by Dr. McIlwraith were very interesting and some of the causes were very rare. He could quite understand the reader of the paper being unable to find any reference to such causes in the literature of the subject as he had not been able to find any. He then divided the subject into two great classes: 1st, Accidental; 2nd, unavoidable. The accidental was open or concealed. The symptoms of the latter were those of sudden haemorrhage without flow. Placenta Praevia was divided according to the emplantation of the placenta into marginal and central. It occurred in the proportion of 1 to 6 in primipara to multipara. Among the causes assigned were the pregnancies following quickly upon abortion, and rapidity of child-bearing. It occurred usually from 7th month on, though the haemorrhage might be seen before that time. In diagnosis, he drew attention to the possibility of feeling the edge of the placenta, as a resisting band, low down on the uterus, the ease with which the foetal parts could be felt through the abdomen in the absence of the afterbirth, and the inability to feel them through the vagina. He described the Braxton-Hicks method of turning before the rupture of the membranes. He mentioned use of the mechanical means now at hand for plugging the os uteri, the application of a tight abdominal binder, and the utero-vaginal tampon for transportation of the patient to the hospital. He quoted the statistics of Hoffmeier and Behm of Berlin, 37 with 10 deaths, using the Braxton-Hicks method, for Hoffmeier; and 36, with no deaths, for Behm. Lormer reported 101 cases with 7 deaths, his own cases being 16 with 1 death. The advantages of the method are: 1st. It does away with the tampon and infection; 2nd. It allows early operation; 3rd. It arrests the haemorrhage; 4th. It gives time for the patient to rally and the cervix to dilate.

SIR JAMES GRANT, M.D, K.C.M.G., HONORED.

Honored by his Sovereign, honored by the leading societies of his profession, at home and abroad, honored time and again by his fellow citizen, Sir James Grant, M.D., K.C.M.G., was honored once again, this time by his fellow-practitioners of Ottawa and district. At a banquet held in the Russell House 22nd April, the Grand Old Man of the medical profession of Ottawa was made the recipient of a beautiful loving cup, chaste in design, and an engrossed address. The latter was expressive of the kindly feeling entertained by his fellow M.D.'s towards Sir James.

A double significance attached itself to the pleasant function. It marked the golden jubilee of the guest of the evening in his chosen profession. Sir James has been a resident of Ottawa and a practising physician within its gates for 49 of the 50 years which have passed since he secured his diploma.

It was a notable gathering, one that did honor to the distinguished guest. About seventy-five persons sat down to the banquet, at which Sheriff Sweetland, M.D., a former fellow-practitioner of Sir James Grant, presided. At his right sat the guest of the evening, and at his left Sir Frederick Borden, M.D., K.C.M.G.

After honoring the health of the King and the Governor-General, the chairman proposed the health of Sir James. Cheers and applause voiced the sentiments entertained. At this juncture, Dr. Cousens stepped forward and read the address. In part it ran as follows:

By the earnestness of devotion and skill which you have displayed in the performance of your professional duties, and by the geniality of disposition and the kindly regard you have shown your confreres in your professional intercourse with them you have acquired a most enviable reputation and have justly won their respect and esteem, and consequently we are proud to hail you as dean of the medical fraternity of the Capital of Canada."

The closing sentences contained a courteous reference to Lady Grant and wishes were expressed for the future health and happiness of Sir James and Lady Grant. The loving cup which was afterwards filled and drained with no fear of microbes, was suitably inscribed. It bore the crest of the Grant clan of Corrimony, of which Sir James is chieftain.

The recipient in rising to reply was greeted with renewed cheers. He spoke as follows:—

The progress and general advancement of medical and surgical science in the past half century is very remarkable. Over 100 years ago, Jenner announced the discovery of the prophylactic influence of vaccine, as the only sure and certain means of abolishing smallpox. For

years prior to this, the subject of practical anatomy was at a standstill for the want of proper material. Physiology was then purely experimental, while histology, justly interesting, and pathology were undefined. Practical medicine was very considerably in advance, owing to the clinical foresight of Lænnec of France, who, by auscultation and percussion, defined much previous obscurity in lung diseases. Peritonitis at that time was common and generally fatal. A major operation was then looked upon as equivalent to a death warrant. In the domain of surgery, Syme and Chopart accomplished much to advance this department of science, and the great Trousseau followed in the path of medicine, clearing up difficult problems, and advancing, all along the line, the subject of practical medicine.

Bright and Addison, co-workers in Grey's Hospital, London, added great light to our knowledge of albuminuria, "Bright's disease," and abnormal conditions of the supra-renal capsules, resulting in bronzing of the skin. What might justly be termed the great scientific advances of the past half century are the introduction of antitoxine for the cure of disease. The germ theory of disease, as announced by Pasteur, and subsequently followed up by Lister, constituting the very basis of antiseptic surgery, and the saving of millions of lives. What a glorious outcome for science. Following in quick succession, came the following discoveries: That malarial fever is no longer considered to result from marshy ground and decayed vegetable matter, but comes directly from the elaborated Laverans plasmodium, and communicated by the mosquito; also that tetanus is the result of certain germs in the soil added to the wounding nail, and thus producing the entire difficulty. Again, typhoid fever is no longer considered to be the result of ulceration of certain gland patches in the alimentary canal, as defined Sir Wm. Jenner. This entire subject has been carefully investigated by a Canadian graduate, Dr. Wm Osler, of Johns Hopkins University, and demonstrated, beyond doubt, to be the result of widely diversified systemic conditions. As a diagnostic indication, Widal's test and the late Dr. Johnson's are of great moment as to the blood condition during typhoid fever. Lastly, the discovery of x-rays and their practical application, in both surgery and medicine are of the greatest possible moment. Few eras in science can count greater magnates than those in our profession in the past 50 years.

In this period, every great centre of the world has been well and ably represented, and the names of the illustrious dead and living mark the paths alike in the great walks of medical and surgical science. In conclusion, gentlemen, let me again thank you for all your kindness and thoughtful consideration, and my earnest wish is that you may all be

spared many years of practical usefulness in the discharge of the honorable duties of our noble profession.

The toast "The Parliament of Canada" was proposed by Dr. R. W. Powell, in a patriotic vein. It was responded to by Sir Frederick Borden, Minister of Militia. Sir Frederick speaking for the medical profession of Canada, extended warm congratulations to Sir James Grant, Dr. McDonald, M.P., of Huron, also replied to the toast.

The other toasts were honored by the following speakers: "The Profession" proposed by Dr. M. O. Klotz, and responded to by Dr. Montizambert, Director of Public Health, and by Senator Sullivan, Kingston.

"The Hospitals," proposed by Dr. Cooke, and responded to by Drs. Chabot, Kidd, Hanna and Law.

"The Ladies," proposed by Dr. Coulter, Deputy Postmaster-General, and responded to by Drs. Royce and O'Brien.

"The Press," proposed by Dr. Aubry, of Hull, acknowledged by the representatives of the local papers.

The gathering broke up with the singing of the National Anthem.

The members of the dinner committee to whom credit is due for the success of the pleasant affair were: Drs. Cousens, Minnes, Troy, Kidd, Hanna, Kennedy, Klotz, Gibson, Aubry, Law, Brown and Chabot.

Amongst those present were Hon. Dr. M. Sullivan, Sir Wm. Hingston, M.D., Montreal; Dr. Montizambert, Director of Public Health; Dr. Rutherford, Sir F. W. Borden, M.D., Sheriff Sweetland, M.D., Dr. Coulter, Dr. V. H. Moore, Brockville; Drs. Johnston, P. McDonald, Argue, Baptie Basken, Bell, Brown, Chabot, Courtenay, Cousens, Chevrier, Cornu, Dowling, Bradley, Henderson, Gorrell, Prevost, A. T. Shillington, Cooke, Craig, Dewar, Echlin, Foxton, Gardner, Foster, Gibson, Grant, jr., Hanna, Horsey, Jamieson, Kennedy, Kidd, Kirby, M. O. Klotz, J. E. Klotz, O. Klotz, Lambert, Leggett, Law, McArthur, McElroy, McKinnon, Maybury, Minnes, O'Brien, McLaren, F. H. Powell, R. W. Powell, Robillard, Royce, Seager, J. W. Shillington, Small, Smith, Troy, Valade, Webster, Robertson, Robinson, Freeland and Vaux, of Archambault, Fontaine, Aubry and Lyster, of Hull; Boyle, of Casselman; Derby, of Plantagenet; Groves, of Carp; Mann, of Renfrew; McIntosh, of Apple Hill; Preston, of Carleton Place; Secard, of Buckingham.

Sir James Grant is of Scottish descent and was born in Inverness-shire, Scotland, in 1831. At an early age he was brought to Canada by his father, the late Dr. James Grant. He received his early education at Martintown, Glengarry county, proceeding afterwards to Queen's University, Kingston, where he took first honors in classics and mathe-

matics. He graduated M.D. at McGill University in 1854, having in the previous year been made a member of the College of Physicians and Surgeons of Lower Canada. After a year's practice in Glengarry, he took up residence in Ottawa and has remained in the Capital ever since. Since 1865 he has held the position of physician to the successive occupants of the vice-royal residence. Sir James has held several high offices in his profession, and has received high recognition of his services. Amongst other offices he has held are those of president of the Canadian Medical Association, president of the Ontario Medical Association and vice-president of the Medical Council of the World. He is a corresponding member of the Association de Benemerite Italiani of Palermo, and was awarded a gold medal by that body in recognition of his standing in medical science. He was created a K. C. M. G. by Queen Victoria in 1887. He has represented Ottawa city and Russell county in the House of Commons Sir James was one of the founders of St. Luke's hospital.

THE ONTARIO MEDICAL ASSOCIATION.

The meeting of the Ontario Medical Association this year promises to be one of great interest and importance. It would be a matter of much regret if the attendance, for any reason, should be small. The executive is putting forth every effort to furnish a high class and enjoyable meeting for the members of the Association. There will be the presidential address by Dr. Mitchell. Dr. Musser, of Philadelphia, will give an address on Medicine, and Dr. Callen, of Baltimore, will give an address on the Treatment of Uterine Myomota. There will be a full discussion of the important subject of Arterio-sclerosis. Dr. H. B. Anderson, of Toronto, is to take up the Pathology; Dr. T. W. G. McKay, of Oshawa, the Cardiac Aspects; Dr. Hugh McCallum, of London, the Cerebral Aspects; Dr. John Caven, of Toronto, the Renal Aspects; and Dr. John L. Davison, of Toronto, the Therapeutics of Arterio-sclerosis. Dr. J. F. W. Ross, Toronto, will give a paper on Septic Peritonitis; Mr. W. R. Riddell, K.C., Toronto, will give an address on the Medical Witness under Cross-Examination; Dr. Adam Wright, Toronto, will give a paper on some obstetric subject; Dr. John Amyot, Toronto, one on the Diagnostic Value of Albumen in the Urine; Dr. A. Primrose, Toronto, is to take up the Treatment of Chronic Empyæma; Dr. G. A. Bingham, Toronto, is to give a paper on the Operative Treatment of Goitre; Dr. C. D. Pacfitt, Gravenhurst, will take up the Sanatorium Treatment of Tuberculosis; Dr. McConnell, Las Vegas, New

Mexico, is down for a paper on the Out-door Life Treatment; Dr. W. B. Thistle will report some cases; Dr. Rudolf, Toronto, will discuss the subject of the Lung Reflex; Dr. Goldsmith, Belleville, is to give a paper on Abscess of the Antrum; Dr. A. McPhedran, Toronto, is to give a paper on Exercise in the Treatment of Chronic Disease, and Dr. W. Oldright, will report some cases. There will be a smoker on the first evening, and a luncheon on the second day. With the promise of such an excellent meeting as the above will furnish it is to be hoped that this year's gathering will be the largest and most successful in the history of the Association. Let every one make a special effort to be present to participate in the enjoyments of the occasion and to lend pleasure to others by his own presence. Please remember the date, 16th, 17th and 18th June.

THE VALUE OF MEDICAL SOCIETIES.

Prof. Osler, in his address at the centennial celebration of the New Haven Medical Association, *Boston Medical and Surgical Journal*, March 12, among many of the good things, said:—

"The well-conducted medical society should represent a clearing house, in which every physician of the district would receive his intellectual rating, and in which he could put his professional assets and liabilities. We doctors do not 'take stock' often enough, and are very apt to carry on our shelves stale, out-of-date goods. The society helps to keep a man up to the times, and enables him to furnish his mental shop with the latest wares. Rightly used, it may be a touch-stone to which he can bring his experience to the test and save him from falling into the rut of a few sequences. It keeps the mind open and receptive, and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine way."

THE CANADIAN MEDICAL ASSOCIATION.

This association meets this year in London, on the 25th, 26th and 27th of August. Arrangements are progressing satisfactorily. The indications are that the meeting this year will be very successful.

UNIVERSITIES AND COLLEGES.

TRINITY MEDICAL COLLEGE EXAMINATIONS.

FINAL EXAMINATIONS:—Gold medal, H. E. Eaglesham; first silver medal, W. J. Perkins; second silver medal, B. F. Consler.

CERTIFICATES OF HONORS:—H. E. Eaglesham, W. J. Perkins, B. F. Consler, B. R. O'Reilly, W. T. Gemmell, E. C. Beer, C. H. Hair A. G. Thompson, J. M. Baldwin, C. B. Stone, B. H. Hamilton, E. V. Smith, R A. M. Cook, C. E. Duggan. G. P. Campbell, W. E. Mason. D. Munro, J. A. Anderson, G. F. R. Richardson, W. W. Milburn, E. T. Curran, J. P. Cade, R. E. Loucks.

THIRD YEAR:—A. W. Caulfield, F. R. Fursey, J. McLellan, H. W. Coulter, R. A. Fraser, J. H. Kidd, R. S. Conboy, B. D. Munro, L. S. Pritchard, C. E. Dixon, J. W. Rowntree, A. C. C. Johnston, W. A. Lawrence, H. F. W. Vernon, A. H. Cook, J. M. Waters, N. G. Allin, W. A. Atkinson, J. F. Adamson, G. H. Boyce, H. A. Bray, J. A. Brown, A. V. Brown, D. G. Cameron, W. L. Chapman, L. Clarke, J. J. Cameron, G. M. Campbell, G. A. Durnan, J. Feltes, A. J. Fraleigh, (B.A.), E. R. Frankish, E. A. Hammond, S. J. Hillis, F. N. Hughes, H. E. Knoke, G. R. Luton, I. W. Lynn, D. Livingstone, S. N. Lyons, B. M. Lancaster, R. A. McLurg, W. E. McLean, W. E. McLaughlin, R. J. Manion, F. J Rundle, G. H. Richards, F. C. S. Wilson, B. C. Whyte, F. J. Dodd passed in pathology, thus completing the examination. W. J. Barber passed in medicine, surgery and pathology.

G. O'N. Ireland passes in medicine, obsterics, surgery, applied anatomy, medical jurisprudence and sanitary science.

FIRST YEAR.—The following members of the first year's class passed the first year's examination as follows:—W. J. Dobbie, B.A., first year's scholarship, $50, and certificate of honor; W. P. Kaufmann, sec- first year's scholarship, $30, and certificate of honor; V. A. Mason, third first year's scholarship, $20, and certificate of honor; N. J. Heatlie, R. W. Mann and C. W. Slemon, certificates of honor; while the following obtained first year standing:—D. E. Howes, E. J. Madden, J. Brigham, J. Spence, H. Galloway, R. Colevill, R. E. Wodehouse, W. G. McGregor, A. B. McLean, M. A. Kendrick, R. Stipe, F. A. Douglass, W. E. Bryans, J. Courtice, W. B. Cassels, G. G. Malcolm, R. Stobie, E. E. Bryans, F. G. Vernon, E. C. Taylor, H. S. Monkman, S. T. White, G. Hodgson, G. W. Houston, J. Rogers, A. Mitchell.

R. F. Armstrong passed in physiology and histology; D. A. Murray passed in anatomy, physiology and practical anatomy; F. B. Smyth passed in materia medica, anatomy, histology and practical anatomy; C. Langmaid passed in materia medica, anatomy, physiology, chemistry and physics and practical anatomy; A. W. Keane passed in materia medica and histology; W. A. Lewis passed in practical anatomy and was recommended, having been ill during the entire examination, to have it granted to him; A. B. McConnell passed in practical anatomy.

DISTINGUISHED MEDICAL GRADUATES OF THE UNIVERSITY OF TORONTO.

The following medical graduates of the University of Toronto have attained marked recognition in a number of universities and colleges in the United States:—

R. R. Bensley, B. A., M. B., Assistant Professor in Anatomy, University of Chicago, Chicago, Ill. F. A. Cohoe, B. A., M. B., Instructor in Anatomy, Cornell University, Ithaca. B. C. H. Harvey, B. A., M. B., Associate in Anatomy, University of Chicago, Chicago, Ill. V. E. Henderson, B. A., M. A., M. B., Assistant Demonstrator of Physiology, University of Pennsylvania, Pa. A. H. Montgomery, B. A., M. B., Demonstrator in Anatomy, Attending Surgeon, Cornell University Medical College, Cornell Dispensary, Ithaca, N.Y. J. B. MacCallum, B.A., M.D., Assistant Physiology, University of California. W. G. McCallum, B.A., M D., Associate Professor of Pathology, Johns Hopkins University, Baltimore, Md T. McCrae, B.A., M.B., M.R.C.P. (London), Associate in Medicine, Resident Physician, Johns Hopkins University, Johns Hopkins Hospital. L. F. Barker, M.B., Professor and Head of Department of Anatomy, University of Chicago. N. M. Harris, M.B., M.R.C.S., (Eng.), L.R.C.P. (London), Associate in Bacteriology, Johns Hopkins University, Baltimore, Md. T. B. Futcher, M.B., Associate Professor of Medicine, Johns Hopkins University, Baltimore, Md. N. B. Gwyn, M.B., Instructor in Medicine, University of Pennsylvania, Philadelphia, Pa. T. S. Cullen, M.B., Instructor in Gnæcology and Abdominal Surgery, Johns Hopkins University, Baltimore, Md. D. G. Revell, B.A., M.B., Instructor in Anatomy, University of Chicago.

MEDICAL GRADUATES WESTERN UNIVERSITY, LONDON.

The results of the examinations at the London Medical School were given out May 2nd. The past session has been eminently satisfactory and the number of students was the largest in the history of the college. Those who took the course came from all sections of the Province, and

a few from the United States. In the fourth year class the medals both went to Londoners, J. R. Armstrong being the winner of the gold medal, and S. F. Abbott the winner of the second highest prize in the gift of the college. Both medals are awarded on the marks obtained by students in their second, third and fourth years.

GRADUATES: J. R. Armstrong, London; S. F. Abbott, London; W. F. Babb, F. Campbell, Belmont; H. McLay, Aylmer; J. C. Elliott, London; W. Lenfestey, Strathroy; G. Byers, Nebraska; J. W. Gustin, London; C. Byers, Nebraska; W. Olmsted, London; P. McDonald, R. L. Keith, Kansas City; W. Gray, St. Thomas; C. A. Fisher, London; A. Voaden, St. Thomas; H. Gordon, London; J. Downing, London.

MEDALISTS: Gold Medalist, J. R. Armstrong, London. Silver Medalist, S. F. Abbott, London.

SCHOLARSHIPS: Third year scholarship, A. J. Manard, Belle River. Second year scholarship, L. G. Rowntree, London. First year scholarship, Norman Beal, London.

HONORS: Fourth year—Armstrong, Abbott, Babb, Campbell. Third year—Manard, Spence, Turner, Wright, Anderson. Second year—Rowntree, Watson, Beer, Glen, Shoebotham, Bucke, Hickson. First year — Beal, Trottier, Hamilton, Holmes, Grover, Stewart, Reid, McQuaide.

DOMINION MEDICAL REGISTRATION.

The medical faculty of the University of Toronto, in the following memorandum, desire to call attention to some recent developments in the Dominion medical registration, which may, if allowed to proceed further without opposition, result in prejudicing the course of medical education in this Province.

As is well known, Dr. Roddick, after several years of effort, succeeded in persuading the Dominion Parliament in passing an act providing for the establishment of a Dominion Medical Council, empowered to hold examinations in medicine and to give licenses to practice, which shall be valid in any portion of the Dominion. This council can be constituted only when all the Provinces of Canada have accepted the provisions of the act.

The act was passed in 1902, and since then all the Provinces, with the exception of Quebec, have expressed their acceptance of it, and have taken the steps necessary to give their acceptance effect. In the case of Quebec, a bill providing for the adoption of the act was defeated in the Legislature on the 15th inst, and the explanation advanced for this action is that the medical profession and one of the universities of

that Province are unable to accept the act as it stands, and that this has influenced the attitude of the Legislative Assembly.

It will be recalled that before the act received the sanction of Parliament there were several clauses in it in regard to which considerable discussion obtained on the part of the representatives of the various institutions interested in medical education. One of these was that dealing with the privileges to be accorded to the holders of university degrees. According to sections 3,972 and 3,977 of the revised statutes, rules and regulations of the College of Physicians and Surgeons of the Province of Quebec, graduates in medicine of Laval University, McGill University, and the University of Bishop's College, who have passed four years in the study of medicine are entitled, without further examination as to their knowledge and skill, to the license to practice medicine in the Province of Quebec, and graduates in medicine of the University of Manitoba are given a like standing in that Province, but all who wish to obtain a license to practice medicine in Ontario must undergo the examinations conducted under the authority of the Medical Council of this Province, whether they are graduates of a university or not. In order to prevent unjust discrimination between the universities of Quebec on the one hand and those of Ontario on the other, the representatives of the latter obtained the insertion in the act of clause 3, sub-section 1, section 10, which reads as follows:—

"The possession of a Canadian university degree alone, or of a certificate of Provincial registration founded on such possession obtained subsequent to the date when this act shall become operative, as provided in sub-section 3 of section 6 hereof, shall not entitle the possessor thereof to be registered under this act."

The representatives of the Ontario universities were told when they suggested this clause that it would make it impossible for the Province of Quebec to accept this act, and interest is given to this statement by the fact that it is this clause which has been in a large part the cause of the refusal of that Province to pass the legislation required to make the act operative.

One of the recent developments referred to is the agitation which has arisen in the medical profession in the lower Province for amendments to the act. The question was brought before the Montreal Medical Society several months ago, and on March 31st last the report from the special committee appointed to deal with the subject was laid before the society, and, after some discussion, adopted. A portion of the report was published in the Montreal press of the following day, and it would appear from this that interprovincial registration, without the intervention of a Dominion Medical Council, was favored as the

proper solution, but if such reciprocity between the Provinces in the matter of medical registration could not be brought about Federal legislation embodying amendment to the Roddick Act should be obtained.

"We submit," says the report, "that the bill is neither desirable nor possible in its present form. We submit, however, that the Roddick bill, as here amended, will meet the desired results and safeguard the general and special interests of the Province in matters pertaining to superior and secondary education."

The following are the amendments suggested to the measure:—

"(1) The Province will name a certain number of representatives, selected either amongst the doctors, the members of the College of Physicians, or from the duly recognized universities.

"(2) These members, to the number of forty, more or less, will constitute a Federal board, which will have power to order an examination, and to deliver a Federal license, which will be recognized by each of the Provinces, on payment by the candidate of the Provincial local license.

"(3) Only those will be admitted to pass their examinations who are licensed doctors in one of the Provinces of the Dominion, or a licenciate of a foreign university, duly recognized by the laws of their respective countries.

"(4) The medical students, duly inscribed by virtue of Provincial laws at the moment the law comes into force, cannot be questioned upon other matters than those taught them in the school or universities prior to this law."

All the amendments suggested deal with important sections of the Act on the basis of which the Roddick bill before it became law, was accepted in this Province, and it would appear, therefore, as if the whole question is to be again opened and brought before the various bodies interested. This perhaps is an advantage, because, as the Act at present stands, it is inoperative so long as Quebec objects to it, and a renewal of the discussion may in the end lead to its acceptance in quite its present form on the part of the Province, or prepare the way for bringing it into operation so far as the other Provinces alone are concerned. As pointed out, the great difficulty on the part of Quebec is the desire of its universities, or at least one of them, to extend over the whole Dominion its prerogatives, which at present are confined to that Province. In other words, they would give the holder of a Quebec university degree in medicine the right, without further examination, to practice anywhere in the Dominion. That is the meaning of the proposal regarding inter-

provincial registration without the constitution of a Dominion Medical Council, and to state it in this way is to dispose of it.

It is, however, in regard to the third of the suggested amendments that particular attention is desired. It would provide that a graduate in medicine of any of the three universities of Quebec would, after registration in the College of Physicians and Surgeons of that Province, be entitled to proceed at once to take the examinations of the Dominion Medical Council, while graduates in medicine of the other universities, that of Manitoba excepted, would only be allowed to take the same examinations after they had passed the examinations of a Provincial Medical Council. The reason for this proposal is that furnished in a leading article, apparently inspired, in a Montreal newspaper of April 1st, which states that this suggested amendment aims at preserving to the universities of Quebec the privileges they now enjoy, and of which the Roddick Act would deprive them.

If this amendment should be adopted, it would impose on every medical student in a university of Ontario three series of examinations, one for his degree, one for his Provincial license, and the third for that of the Dominion; while the student of Laval, McGill or Bishop's College would have to undergo two only, the first and the last. This would involve a very serious discrimination in favor of the Quebec universities, and it would result in compelling the student of an Ontario university to spend about two months out of every session of eight months in undergoing medical examinations. To escape the burden and the number of these, all in this Province proposing to study medicine would go to the medical teaching institutions of Quebec. This would not, it is certain, make for an elevation of the medical standard.

It is obvious, therefore, that the suggested amendment cannot be accepted in Ontario. This being so, what can be done to bring the Act into operation?

It is possible that after further agitation the representatives of the profession in Quebec may be led to see that the Act, as it now stands, offers fewer difficulties for all the Provinces than it would with amendments such as those suggested, but, failing that, there are two other solutions, one of which would bring the Roddick Act into operation, but not so far as Quebec is concerned, the universities and profession of that Province, in that case, having no representation in this Council under the Act. The other, and perhaps the more practicable, solution would provide that all students of the universities of Quebec, as demanded by the Montreal Medical Society, should be required to obtain the license to practice medicine in that Province before being allowed to present themselves for the examinations of the Dominion Medical Council, but that

those of the universities of the other Provinces should be permitted to proceed directly to the same examinations, while, further, all students, after passing the required Dominion examination, should be allowed the license to practice medicine in any Province on payment of the Provincial registration fees.

The first solution would have one disadvantage. It would not bring about reciprocity in medical registration with the other parts of the empire, but this would be greatly out-weighed by the advantage of having one licensing body only for all the Provinces except Quebec.

The second solution offered would preserve for the universities of Quebec their privileges in that Province, while it would not work such injury to the universities of Ontario as the alteration of the Roddick Act proposed by the Montreal Medical Society would inflict.

QUEEN'S MEDICAL FACULTY.

Queen's University Board of Trustees intends to place the Medical College affairs on a more regular basis. For years past the medical department has been controlled almost wholly by that faculty, which collected and disbursed its own fees, now amounting to close on $20,000. It is now proposed to transfer all clerical work to the university registrar's office, and the finances to that of the treasurer. The salaries of the medical professional staff will also be re arranged, as it is claimed that some of the doctors are not being paid in proportion to their positions and the work they do. The trustees will make a complete readjustment, and also make some changes in and additions to the staff.

GOVERNMENT GRANTS TO THE UNIVERSITY OF TORONTO.

The Provincial grants for higher education for 1903, as brought down in the estimates this week, with the figures of expenditure last year, are as follows:

	1902.	1903.
University College—Ladies Department	$ 550 00	$ 600 00
Agriculturial examination—University Degree B.S.A.	425 00	425 00
Printing University, Historical, Economic and other papers	600 00	600 00
Statutory Grant to University	7,000 00	7,000 00
Grant from the sale of Lands	2,874 87	2,014 76
University of Toronto	40,444 75	36,334 00
University of Toronto, estimated deficit	.....	18,110 48
School of Mining, Kingston (transferred from charges Crown Lands)	23,500 00	23,500 00
	$75,394 62	$88,584 27

BISHOP'S MEDICAL COLLEGE GRADUATES.

The following gentlemen have graduated at Bishop's Medical College and at the convocation received the degrees M.D., C.M.: J. Frankum, W. W. Kelly, F. Richards, W. H. White, D. W. Morrison.

THE CANADA LANCET

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EDITORIAL.

THE MEDICAL COUNCIL MEETING.

In a few days the annual meeting of the Medical Council of Ontario will take place. Among other matters that will be up for discussion the curriculum of studies will no doubt occupy a prominent place. Already THE CANADA LANCET has pointed out the need for very decided reforms in the curriculum. So far it is not known in what direction the council purposes introducing changes.

There should, however, be no relaxation of the standard. The full five years' course should be maintained. THE CANADA LANCET has already expressed the opinion that there should be annual examinations. A definite amount of work should be assigned for each year. At the end of each session the student should be subjected to a thorough examination on the work of the year. If he does not know his work, the sooner he finds it out the better. A failure in his first or second year will either make a good student of him, or, in many cases, drive him to some other calling, much to his own advantage and no loss to the profession.

The curriculum of studies should be so arranged that the student is not repeating the same ground for two or more sessions. This can be accomplished by the system of annual examinations. These examinations ought to be of a most searching character, and be written, oral, practical and clinical. In fact, every means should be exhausted to find out whether the student knows his work or not. This is good for the student, and is fair to the profession and the public. In this matter the Medical Council has a great trust reposed in it, and much is expected of it.

Perhaps the fifth year is the one over which there may be most discussion. At present, the fifth year is not accomplishing all that was expected of it. It was intended that the student should put in his fifth year in practical work in a hospital, at a dispensary, or with a doctor. This was an attempt to introduce the apprenticeship system in a modified form. It was felt that it was hardly the thing to grant the

license to a student, who perhaps had never seen a case of measles or chickenpox.

If the fifth year could be made a truly practical year, it would be an excellent thing. As it is, the fifth year does not yield as good results as was intended by those who advocated it. This is not the fault of a fifth year, but in the way in which it is too often put in by the student. He arranges to attend some hospital, or dispensary, or to put in his time with a doctor. But the actual time spent in practical work and seeing of cases is very nominal. Strict regulations should be enforced on this matter, and the Council should be perfectly satisfied with all the certificates submitted by students for this practical experience. We think the Council ought to insist upon nine months of the fifth year being spent in honest, practical work. To aid in this, a form of certificate might be prepared by the Council, which would be supplied to the students, and on which they would be required to submit their evidences of practical work. The hospital or dispensary officials, or the doctors with whom they studied, would have to fill in the information called for in the blank form of certificate. The Council should reserve the right to enquire into the genuineness of any or all of these certificates.

One thing is certain, the fifth year should not become a year for lectures merely. When the Universities confer their degrees they are through with the students. They have no further legal right to impose lectures upon them. If they wish to give lectures during part of the fifth session, then they ought to withhold their degrees until the end of the fifth year. Once a student receives his M.B., or M.D., he parts company with his University, and is in future wholly in the hands of the Medical Council. We do not object to the Universities imposing a five years' course, but it should not be done through the medium of the Council, by the latter body so amending the curriculum as to enable the Colleges to demand attendance upon lectures after the students have obtained their degrees. In the matter of the fifth year, the Council must act on its own responsibility and for the best interests of the student and the profession; and we believe that this will be best attained by a fifth year wholly devoted to practical and clinical work; but the Council owes it as a duty to itself and its constituents that this is not performed in any half-hearted manner. The Council has the power to insist on a thorough performance of a practical fifth year. If this is done, the fifth year will be the most valuable part of the student's course.

THE DOMINION REGISTRATION BILL.

In another portion of this issue we publish the findings of the Medical Faculty of the University of Toronto on the important matter of Dr. Roddick's bill.

We regret very much that the Province of Quebec has not seen its way clear to the adoption of the Roddick bill. We think it furnishes a very satisfactory solution to the whole question of the establishment of a national profession.

The great difficulty in the way so far has been the unwillingness in some quarters to give a little. There seems no lack of a desire to take; but an absence of that other and necessary spirit, to give a little.

If the Province of Quebec is not willing to accept the Roddick bill the other provinces could, as already suggested in THE CANADA LANCET, seek such amendments to the bill as would enable them to form a common standard, leaving the Province of Quebec out, until it saw its way to come in with the other provinces.

Or the Province of Quebec might retain its present Board of Governors, and require all who sought the right to practice in Quebec to take the Provincial License or a qualification acceptable to the Quebec Council. If any of the graduates of the Universities in the Province of Quebec desired a qualification, covering the wider field of the Dominion, they could present themselves before the examining body, established under the Roddick bill. This would preserve to the Province of Quebec its local medical standard, and still place within the reach of its practitioners the privilege of practicing in the other provinces.

Surely there is some way out of this difficulty! One would think the Universities and Medical Schools of the Province of Quebec would have hastened to support this measure. Indeed, one would have thought that every medical man in the entire Province of Quebec would have taken this course. They have everything to gain, and nothing to lose.

It is quite true that the graduates of McGill, Laval and Bishops Universities can register and practice in Quebec without further examination. But this is far more than off-set by the fact that the graduates of these universities must pass the Provincial examinations of the other provinces before they can practice outside of the Province of Quebec. By passing the examination provided under the Roddick bill they could locate in any province in the Dominion.

We sincerely hope that the Province of Quebec may yet see its way clear to the acceptance of the bill creating a Dominion standard. If this should not be possible, then let Quebec maintain its present provincial system, and let all the other provinces accept the Act, leaving Que-

bec out altogether, having no representatives on the Dominion Council. This would require an amendment to the bill, but we feel confident that the Federal Parliament would grant it.

It seems quite clear that the universities in the Province of Quebec would be greatly the gainers by the Roddick bill becoming law. McGill University and the University of Bishop's College, whose students are English-speaking, would have the entire Dominion opened up to them by passing the examination of the Dominion Council. The students of Laval Medical College, almost wholly French-speaking, would still retain the Province of Quebec as their main field, but would also gain access to other French-speaking settlements in other portions of the Dominion. To do this now, they must pass the Provincial examination of these districts. This is just as difficult as it would be to pass the examination of the Dominion Council, and not so satisfactory in its results.

From the attitude of the Board of Governors of the Quebec Medical Council, and the recent action of the Quebec Legislature, we fear there is little hope of that Province coming into the arrangement with the other Provinces. The solution appears, therefore, to be that the members of the Federal Parliament from all the other Provinces of the Dominion should amend the Act to permit its coming into operation without the co-operation of Quebec; but to permit any student or practitioner of Quebec to avail himself of the privileges of the bill if he so desires. This should be granted, as it takes nothing from Quebec, and concedes a certain privilege.

THE BIRTH, DEATH AND MARRIAGE RATES IN ONTARIO.

From the report relating to the registration of births, deaths and marriages in the Province of Ontario we gather some very important facts. The population of the Province is given at 2,184,144. The total number of births registered in 1901 was 46,061; the total number of marriages for the same year was 18,035; and the total number of deaths was 29,608. It is claimed that the returns must be regarded as practically complete.

The birth rate for the Province is given as 21.1 per 1,000 of the population. The marriage rate is stated at 8.2 per 1,000, and the death rate at 13.6 per 1,000. Roughly speaking, taking the entire population of a community of all ages and dividing 1,000 by the average death rate per 1,000, the result is the expectation of life for those born in such a community. If this test be applied to Ontario it will be found that the expectancy of life to those born in the Province is about 73 years. This is altogether too high, and could not be accounted for by the fact that

the country is a young one, and that the movement of the population is affected by immigration and emigration to and from the Province.

The accurate method of finding the expectation of life in any country is to divide the number representing all living older than one year by the number representing those living one year and under. The number born in Ontario is 46,061, of whom 6,543 are stated to have died in their first year. This would leave 39,543 alive in the first year. The total number living in the Province, after deducting the deaths and those one year old would be 2,098,540. This would give an, expectancy of life for the Province of about 52 years. In Great Britain it is about 50; in Germany, 42; in France, 46; in Austria, 33; in Italy, 40; and in the United States about 51. It would, therefore, appear by this test that the death rate for Ontario is set down too low, and the returns cannot be complete.

The following table will go to show that the birth, death and marriage rates of the leading countries of the world lead us to expect much higher rates in these than we find recorded in the Ontario reports. The table is based on each 1000 of the population, and is as follows:—

—	Births.	Deaths.	Marriages.
England and Wales	30.5	19.2	15.2
Ireland	22.9	18.5	9.5
Scotland	30 4	19 0	13.2
Sweden	27.4	16 2	11.4
Norway	30.4	16 3	12.9
Denmark	30.6	17.4	13.8
Finland	31.5	21.6	12.9
Germany	35 9	24.6	15.8
Austria	37.1	27.2	15.7
Hungary	41.6	31.8	18.6
Holland	32.8	19.2	14.5
Belgium	29.2	20.3	15 3
France	22.3	21 6	14 9
Italy	34.3	25.3	14.9
Japan	31 3	20.4	11.0
Portugal	29 5	21.1	7.0
Russia	44.0	29 8	15 0
Spain	35.3	29.6	9 0
Switzerland	29.6	18.2	8.5
United States	26 7	18.3	13.0
Ontario	21.1	13.6	8.2

It should be remarked that the marriage returns for Spain, Portugal, Switzerland, Japan and the United States are very incomplete, and this may account for the apparent low marriage rates in these countries. From the above wide collection of data, it would appear that Ontario strikes too low an average to be correct. It behooves the authorities to put forth renewed efforts to render these statistics more trustworthy. Much has already been done, but there remains a good deal more to do do before the results can be regarded as satisfactory.

A LAYMAN'S OPINION OF VACCINATION.

Flaneur, in a recent issue of the *Mail and Empire* writes as follows on the agitation against vaccination:—

"Lately I have received several letters from different parts of the country written by anti-vaccinationists. These propagandists are few numerically, but active and persistent. The letters are not published in this department, because, in my opinion, it would be waste of space. If the writers like to address their communications to the editor of this paper they may or may not receive different treatment. The letters I have received on this subject, while of course they are not, might all be written by the same individual; the arguments are so old, so similar, and so familiar. On this subject I have no opinion of my own, but accept the views of those whom I think ought to know. That the pick of the medical profession all over the world endorses vaccination is quite enough for me, and I am not so conceitedly silly as to pit my mere opinion against the special knowledge and training of qualified men. A supposed point made by nearly all my correspondents is that the medical profession advise vaccination because it pays them to do so. Literally, this means that medical men in the mass deliberately spread disease and commit murder for gain! This, I brand as a gross and vulgar insult to as honorable a body of painstaking professional men as can be found in any civilized community.

GERMAN DOCTORS TO GO ON STRIKE.

The medical periodicals announce that physicians throughout Germany who are employed by sick fund societies will strike on July 1st. They complain of the insufficiency of their fees, which, under the Invalids' Insurance Law, are only about four cents for each visit The medical profession is overcrowded, and a great majority of practitioners are obliged so accept contracts from sick fund societies, the revenue of which is provided by compulsory contributions from employers and employes. The doctors at Gera and Mulhausen have already successfully struck, and the managers of the sick funds at those places are compelled to pay the ordinary fees of independent physicians. The National Physicians' League, which supported the strike at these towns, will engineer the general strike. The demands are not yet formulated definitely, but they include the appointment of an impartial committee to fix fees in accordance with the conditions existing in various localities. The physicians also demand that the patients, instead of the sick fund managers, be allowed to choose their physicians. There is a bill now before the Reichstag dealing with the question, but it does not satisfy the physicians.

OBITUARY.

R. B. COTTON, M.D.

Dr. R. B. Cotton, of Regina, died 6th May, of pneumonia. He was 48 years of age, and came to Regina from Mount Forest, Ont., in 1882. He was a brother of Dr. J. M. Cotton of Toronto.

ALLAN JACK, M.D.

Dr. I. Allan Jack, former recorder of St. John, N.B., died April 5th, aged 60. He had been long confined to his house, but until eight years ago was active in his profession. He was a graduate of Kings College, Windsor.

ROBERT ADDINGTON, M.D.

Dr. Robert Addington, died at Brookfield, Colchester County, April 13, aged about eighty years. He practiced medicine in Shubenacadie and Brookfield for many years. He was a widower and leaves three children—Dr. Seaman Addington, at Upper Stewiacke, Miss Addington and Robert Addington, both of Brookfield. The deceased was one of the best known physicians of Nova Scotia.

JAMES G. ATKINSON, M.D.

Dr. James Gordon Atkinson died at his home, Bristol, N.B., on Easter Sunday morning, at the age of 55 years, after an illness of some months. Dr. Atkinson was born at Baie Verte, Westmorland county, and taught school for a number of years, before studying medicine. He then located himself in Charlotte County where he took a prominent part in local politics, and sat at the Council Board for several terms. After the death of his brother, the late Dr. M. C. Atkinson, M.P.P., about seven years ago he moved to Bristol, and soon established a good practice, and for two years represented the Parish of Kent at the municipal council. He leaves a wife, who is an invalid, and one son, R. B. Atkinson, and one daughter, Mrs. Sankey Rogers.

SAMUEL BRIDGLAND, M.D., M.P.P.

Dr. Samuel Bridgland, one of the most popular members of the Ontario Legislature, died 6th May, at his home in Bracebridge of Bright's disease, after an illness of six months. Notwithstanding his failing health he was in attendance at the Legislature this session up to the time of the

adjournment in March. He was far from fit, however. He took alarmingly ill ten days ago, and lay in a critical condition for some days. He was apparently improving, however, and Saturday, 2nd May, was able to go home to Bracebridge. Dr. Bridgland was born in 1847, in Toronto. He later removed to Newmarket, and it was at the Grammar School of the then capital of North York that he was educated. He studied medicine at Jefferson Medical College, Philadelphia, and graduated from Queen's University, Kingston, in 1870. He at once settled in Bracebridge, where, until his death, he continued to practice his profession, and was for many years one of the most widely known and busiest physicians in the north country. A man of broad sympathies and kindly manner he was everywhere beloved and universally popular. Three years after settling at Bracebridge Dr. Bridgland married Miss Emma Fraser, a daughter of Mr. Henry Fraser of Barrie, and leaves besides his widow, three daughters, all of whom are residing at home. Dr. Bridgland was a prominent politician, and at the general election of 1898 was elected to the Legislature, and was again returned by a majority of 88 at the last election The member for Muskoka was extremely popular because of his quiet, genial disposition. Dr. Bridgland was a member of the Church of England, and a prominent Free Mason, Past Master of the Muskoka Lodge. He was known also as a curler, and the Bridgland Cup has for years been an annual prize among the curlers of the north.

EMILY HOWARD JENNINGS STOWE, M.D., M. C. & S O.

In the death of Dr. Emily Howard Jennings Stowe, which took place on 30th April, there has passed away one to whom not only Toronto but the Dominion at large owes much; for it is largely through her efforts that Canadian women enjoy many of the privileges they to-day accept so calmly as their rights. The world has many who see its evils, but few with the courage and perserverance to stand adverse criticism and ignorant prejudice until wrongs are righted. Dr. Stowe was a pioneer in the realm of thought, and it was only after much effort and many discouragements that she obtained in the recognition of the rights of her own sex a reward for her self-denial and her endurance.

Dr. Stowe's advanced ideas and her strong literary and artistic ability were in a measure inherited, her father being Solomon Jennings, of Vermont, and her mother, Hanna Howard, a member of an old Rhode Island family, of noted literary ability. Dr. Stowe's parents came to Canada, settling in Norwich, and here Dr. Stowe was born. She received her early education from her mother, who was herself a talented

woman, and at the early age of 15 was qualified to teach a small school near Norwich. Thence she steadily advanced until she became principal of a school in Brantford, being the first woman to hold the position of principal. This was the first of her many successes as a pioneer worker. From this position Miss Jennings married Mr. John Stowe, an English gentleman. In 1865, after the birth of her three children, Mrs. Stowe decided to study medicine, something unheard of in those days. She applied to the University of Toronto for permission to attend the lectures. She received the reply that, fearing the admission of women would render the enforcement of discipline very difficult, her request would have to be refused. Mrs. Stowe's reply proved to be prophetic: "Your Senate may refuse me entrance, but the time will come when you will be compelled to open your doors to women students." Mrs. Stowe went to New York, where only four years before the University of New York had been opened to women students. She graduated in 1868, and returned to Canada to take up her work. The fees were then pitifully small, and the prejudice very bitter, but with courage undaunted and strength truly marvelous, Dr. Stowe cared for her small family, her husband being much of the time an invalid, and attended to her practice. Dr. Stowe was truly a womanly woman, if the word be taken in its broadest sense, namely, one who is gentle and desirous of helping others; but she was also a mother in the full depth and breadth of this word.

In an endeavor to educate the public mind to somewhat broader ideas along all reform lines, she delivered a series of lectures in Toronto, London, Woodstock and other Canadian towns. In 1877 she organized a society, which, in deference to popular prejudice, was called "the Women's Literary Club," but which in time, as the public mind become educated along the lines of women's rights, appeared under its true title as "The Toronto Women's Enfranchisement Club." In 1882, the ground having been prepared by Dr. Stowe and others, through the instrumentality of this club, the Local Legislature was petitioned that the privileges of the Toronto Universities be extended to women, and in the session of 1884 and 1885 this was finally accomplished, Dr. Stowe having the proud satisfaction of seeing her daughter the first woman to take a degree in medicine in Canada.

As the pioneer woman suffragist, Dr. Stowe bore the brunt of much adverse criticism, but in sanitary arrangements in the stores and factories, seats for the shop girls, municipal suffrage, and an alleviation of the evils of the sweat shop, we to-day are reaping the benefits of reforms this true lover of humanity was chiefly instrumental in bringing about.

In 1893, when she met with an accident, Dr. Stowe had practically given up general practice, which had grown until at that time she had

the gratification of knowing it rivalled those of some of the most prominent physicians of the opposite sex. Most of her time since then had been spent at her island home in Lake St. Joseph, Muskoka, where a practically barren island has been changed under her skilful supervision to a veritable garden, where fruit and flowers are found in abundance. This had of late years been her hobby, and she had just before her last illness made all preparations to spend another summer in the home of her own planning, when almost without warning she was called away.

Not only to a family circle, but to the women of Canada, will the death of Dr. Stowe be felt as an irreparable loss, for she it was who laid the corner-stone, who did the hard, and oftimes seemingly unappreciated pioneer work for the position Canadian women hold to-day. Women who now choose the medical profession in Canada and find every facility provided for their various courses of study can never know how deeply they are indebted to the pioneer who opened the path they so easily follow. Intellectual courage, clear conviction, steady, unswerving purpose, a composed, philosophic mind, were the qualities that won success in a long struggle against the mental inertia and reaction that would deny to women the right to study and practice medicine. She recognized prejudice and reactionary views as natural weakness, obstacles to be expected and to be removed from the path of progress. Her faith in the final triumph of enlightened views regarding woman's position in society was never shaken. The opening of Toronto University to women and the extension of the franchise in Ontario are among the results largely due to her persistent efforts.

BOOK REVIEWS.

SURGICAL ANATOMY

A Treatise on Human Anatomy, in its Application to the Practice of Medicine and Surgery. By John B. Deaver, M. D. Surgen-in-Chief to the German Hospital, Philadelphia. In three Volumes. Illustrated by about 400 plates, nearly all drawn for this work from original dis-sections. Vol. II., Neck ; Mouth ; Pharynx ; Larynx ; Nose ; Orbit ; Eyeball ; Organ of Hearing ; Brain ; Male Periner, Farnal Perineum. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Toronto : Messrs. Chandler and Massey. Price $7.00 per Vol. in cloth. $8.00 in leather.

We have already reviewed the first volume of this superb work on surgical and medical anatomy. What was then said of the first volume holds good for the second volume, with the exception that the more one peruses these volumes, the more appreciation of them grows. It would

be difficult indeed to conceive how a more perfect work could have been produced. The whole subject of anatomy is taken up in such an original and unique manner that what is often considered a dry or uninteresting subject becomes a most fascinating study. We again venture the opinion that no one will ever regret the purchase of this work.

REGIONAL MINOR SURGERY.

Regional Minor Surgery. By George Gray Van Schaick, M. D., Attending Surgeon French Hospital, N. Y., etc., etc. Bound in cloth. Heavy book paper, 226 pages. Profusely illustrated. Price $1.50. International Journal of Surgery Co., N. Y.

This work occupies a unique position. Although devoted to minor surgical technics, the same amount of care has been bestowed upon the treatment of each individual condition that it is in text-books accorded only to subjects of major surgery. The aim throughout has been to provide the general practitioner with a book that will afford him such practical information as he can utilize in his routine surgical work. No space has been taken up by theoretical discussions, each subject being treated in a clear and concise manner, yet omitting no detail of the least importance. While in many surgical affections a number of methods are applicable, the writer has selected only those which, in an extensive experience of nearly twenty years in hospital and private practice, have proved most satisfactory. The book is profusely illustrated with original sketches.

WOOD'S REFERENCE HAND-BOOK.

A Reference Hand-book of the Medical Sciences Embracing the entire range of Scientific and Practical Medicine and Allied Science by various writers. A new Edition, completely revised and rewritten. Edited by Albert H. Buck, M.D. New York City. Vol. IV. Illustrated by Chromolithographs and eight hundred and fifty-nine half-tone and wood engravings. New York: William Wood & Co. 1902-Price per Volume $7.00.

The present volume contains 875 pages, and covers subjects from "Ergot" to 'Infiltrations" contributed by a staff of about 115 able writers. As already mentioned in the Canada Lancet in reviewing previous volumes, the press work, binding and illustrations are all that could be desired. These volumes make a complete liabrary, covering the entire field of medical and allied sciences. Many of the article have been carefully examined, and invariably found to have been well written and thoroughly up-to-date in their matter. Grea tpraise is due both the Editor and the Publishers for the high standard of this work.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS.

By Roberts Bartholow, M.A., M.D., LL,D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene, in the Jefferson Medical College of Philadelphia; Formerly Professor of Materia Medica and Therapeutics and of the Practice of Medicine in the Medical College of Ohio, Etc., Etc. Eleventh edition, revised and enlarged. New York and London: D. Appleton & Company. Toronto: G. N. Morang & Company.

The preface to the first edition was dated at Cincinnati, Ohio, June, 1876. The present, eleventh edition, is dated at Philadelphia, Pa., 1903. For twenty-seven years this work has been before the medical profession, and has been read by thousands of students, who have owed to it their initiation into the uses of drugs in the treatment of disease. In the text-book of Professor Bartholow, these students had a sure guide. It is a common experience to meet with those who say that in the practice of medicine and in therapeutics they read "Bartholow," and there need be no apology for making such a statement. To learn with what care the present work has been kept up to date, one needs only look through the first edition of twenty-seven years ago. The first part of the book treats of the "modes in which medicines are introduced into the organism." In this portion of the work there is much excellent advice on the subjects of absorption through the skin, the mucous membranes, by subcutaneous injections, and by the veins. The second part takes up "the actions and uses of remedial agents." This portion of the book is divided into systemic remedies, and topical remedies. The book closes with a very complete clinical index of diseases and the remedies of most use in their treatment. The various drugs are described under the headings of preparations, antagonists, and incompatibles, synergists, physiological actions, therapy, local uses when such belong to the drug, and toxicology. The information furnished is full, explicit, and reliable in every instance. The work is, as the author states in the preface, "a store-house of facts relating to materia medica and therapeutics." Dr. Bartholow is an experienced teacher, knowing what is most required; and he has a good choice of expression. The work, therefore, conforms to the definition of a good book by the great philosopher, Kant, that it should be excellent, both in matter and form. This we can cordially say of the present edition; and wish for it, what it deserves, many readers. The publishers have done their part well. The book consists of nearly nine hundred pages. It is well printed on very fine paper and attractively bound. In these respects the publishers have aided very decidedly the distinguished author, and have added greatly to the comfort and pleasure of the reader.

J. C. MITCHELL, M.D.,
Physician to the Asylum for the Insane, Toronto;
President of the Ontario Medical
Association, 1902-3.

J. H. MUSSER, M.D.,
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PRESIDENTIAL ADDRESS, ONTARIO MEDICAL ASSOCIATION, 23rd ANNUAL MEETING.

By J. C. MITCHELL, M. D., Physician to the Asylum for the Insane, Toronto.

GENTLEMEN of the Ontario Medical Association: To have been deemed worthy of the most exalted position within the province of this Society to grant, is indeed an honor.

The opportunity, however, to prove whether or not such virtue lies within me demands warmer expression of thanks, more zealous and untiring service from its recipient in order that the unblemished name and history of this Association may still stand for all that is worthy and of good report in our work.

For both the kindly thought and the opportunity then, I desire to again express my thanks to the Medical Association of Ontario.

Permit me also to gratefully express my keen appreciation of the wisdom displayed in the selection of the executive. Surely no general ever had more faithful, earnest officers than were elected to support the hands of your president this year. To them, if there be success attending this meeting, let there be ascribed whatever of honor is associated in your minds with the successful carrying out of the general idea and the details of this meeting; theirs has been the tilling and sowing with the labor late and early, that to you may come the full measure of reward for your faithfulness to this old Society which has meant much to many of us during the past years.

And now once again the president and officers greet the members and friends of this Association and desire to make their greeting warmer and more full of friendship than ever before, for has not our sympathy been mellowing and ripening during another year, short though it may seem.

And not alone the old members do we greet with gladness but the new, and those who come to us as welcome guests,

I utterly fail to grasp the true sentiment of the profession here if your visit at this time does not make you feel how glad we are to have you as our guests, and how anxious we are that this brief period of relaxation from your onerous professional duties may be one of the most pleasant and profitable you have ever spent.

This Province, though young in years, has for the greater part of its life taken a prominent place in educational matters.

Our public school system growing out of that established by that wise educationalist, Dr. Edgerton Ryerson, is one of which we are justly proud, and yet it has its faults.

A few years ago, Dr. Ferguson, of London, read a paper before the Association, pointing out the injury occasioned to our growing youth by the present system of determining promotion by the result of written examinations. He showed how a very large amount of the work done was simply cramming for examination and not true education, and that a great many children and young people were severely injured in health from the unwise but unavoidable competition under the system.

At last, freedom and better order are making their appearance. The Hon. R. Harcourt, Minister of Education, has brought in a bill this session making changes, as far as city schools are concerned, and he proposes discussing more radical changes with a committee appointed at the Ontario Teachers' Association, so as to enlarge its scope next year to apply to all the schools of the Province, thus making our systems more educative and less competitive, by combining with it manual training and eliminating many of the examinations. Our pupils will not then be under so great a mental strain, and will have better opportunities to mature and make the healthy men and women this country requires for the great future it has before it.

Truly we can get along with fewer neurasthenics, neurotics and cranks than we have at present. We welcome the evidence of progressive thought and interest in the welfare of our youth on the part of the Government.

We congratulate the medical schools of the Province on the good work they are doing. Our graduates compare most favorably with those of similar length of training wherever they may hail from: men going from our schools having that within "which maketh them not ashamed," notwithstanding the immense endowments of many of the wealthy colleges elsewhere on the continent.

The rapid changes and development in both medicine and surgery will soon require a longer and more extensive course than at present, and we can confidently depend upon the Ontario Medical Council keeping up the standard required to meet the exigencies of the times.

We can also trust the efficient staff of each of our medical colleges to make the clinical teaching keep pace with the large amount of work now required in the laboratory, so that our graduates may be as skilled in their observation of symptoms as they are in chemical and microscopic analysis.

We are glad to note the ever increasing number of our practitioners, who are spending a greater or lesser amount of time in post-graduate work.

Has not the time arrived for the establishment of a post-graduate course in Toronto?

We have physicians as well instructed in scientific medicine, and surgeons who operate as skilfully as can be found anywhere. Our hospitals, too, have increased in number and importance, so that plenty of material could be at hand.

A staff, formed by the union of our best men to give a post-graduate course, could not fail to be of benefit to the Province; and afford opportunities of advanced study to many who could not, and to many who should not be allowed to go elsewhere.

We are glad to notice the increased number of hospitals throughout Ontario. It means a great deal to the afflicted, and particularly to those of limited means. It will give our local surgeons and practitioners a chance to do better work, and to obtain vastly better results from the improved regime possible in a more general use of the hospital. We trust it will not be many years until every town in Ontario will have its hospital.

We congratulate Lady Minto on her success in the establishment of Cottage Hospitals, and feel sure she will be rewarded for her labors in this direction through the benefit obtained by those afflicted ones who will receive care and treatment therein.

In our city hospitals I would endorse what our immediate past President, Dr. Powell, proposed last year that the term of the house surgeon should be extended to at least eighteen months, and so arranged that only half the staff be relieved at one time, so that skilled and expert men may be always in attendance. In this way a new appointee would not occupy a responsible position until trained for it, and a skilled anaesthetist would always be available.

In Provincial legislation the only matter of special note is the regulation adopted by the Provincial Board of Health, on February 12th last, *re* scarlet fever. It has occasioned a great deal of adverse criticism and it is questionable if the order for removal to either isolation hospital or tent is practicable at all seasons of the year, either in congested communities or rural districts; and, unless the attending physician has some voice in the matter, it is not likely this law will be productive of good.

As for the Dominion House, Dr. Roddick succeeded in getting an act passed, providing for the establishment of a Dominion Medical Council, with full power to hold examinations in medicine and grant

licenses valid in any portion of the Dominion. This Council can only become constituted when all the provinces have accepted the provisions of the Act. With the exception of Quebec all have enacted such legislation as to make the act effective. The legislature of the Province of Quebec, however, defeated the bill introduced for the purpose of rendering the bill operative. The reason for this action was that, under the present Provincial Act, Quebec graduates in McGill Bishops and Laval Universities who have passed four years in their studies and obtained their degrees are entitled, without further examination, to obtain a license to practice medicine in that province. Graduates of the Manitoba University also require but four years, whereas, in Ontario, as we all know, a fifth year has to be spent before the candidate can go up for his final examination before the council.

Dr. Roddick's Bill, had it been accepted, would have placed students in all the provinces upon the same footing and, having passed the examination of the Dominion Council, the successful candidate would then have possessed a license entitling him to practise anywhere in Canada.

The series of amendments to the act suggested to render it acceptable to Quebec would be so manifestly unfair to Ontario that we, of this Province, could never accept them. It would appear, therefore, that inter-provincial legislation is dead for the time being, unless Quebec is willing to rescind its action of the past session, and, like Manitoba, unselfishly place itself on the equal and advanced footing of the other Provinces.

Dr. Roddick, however, still has hopes and writes to say that, "Considering that four of the Provinces have completed the concurrent legislation necessary, I am not disposed to give up the fight."

He is now asking the Parliament to amend the Dominion Registration Act so as to permit the Provinces that favor it to begin at once the work of such registration.

The doctor certainly deserves great credit for the vigorous fight he has put up, and we earnestly hope he may be successful in his efforts.

The need for, and importance of, the continuous education of the public on the lines of public health and prophylaxis is well illustrated by the formation of an anti-vaccination society in this city. At some of the meetings of this society, this year, some practising physicians made statements, (or were reported to have made them according to daily papers, April 10th), so wide of the truth that they showed a most lamentable ignorance of the whole history of the subject.

When we find the very commendable action for the enforcement of vaccination questioned by one of our own profession, and by the bringing

in of a law at the late session of the legislature for the repeal of said enactment, it is certainly time to look into the matter and ventilate it as thoroughly as possible.

We believe with Dr. Ridpath that: "Essential freedom is the right to differ, and that right must be sacredly respected, nor must the privilege of dissent be conceded with coldness or disdain but openly, cordially and with good will. No loss of rank, abatement of character, or ostracism from society must darken the pathway of the humblest honest seeker after truth. The right of free thought, free enquiry and free speech to all everywhere, is as clear as the noonday and bounteous as the air and the sea."

If all professed seekers after truth were only honest in their views, we could have no quarrel with them, even though we might differ in the result of our investigations. Some talk loudly on these subjects, simply for effect, and are not honest in their statements, but desirous to achieve notoriety. Others talk through ignorance, having never taken either the time nor labor to obtain for themselves the facts of the case. Then, added to these classes, we have the cranks and bores who will have a word in any way, even if it be to repeat again and again some set speech.

At the same time, it is the duty of the medical profession to continue to do as they have done in the past: ascertain all the facts in the case, study out the underlying truths, and put them, so far as we can, in the possession of the public. We must, so far as in us lies, continue to protect the public from themselves, even though we may often be called hard names, and lie under the charge that we are working with interested motives. On the contrary, we have motives of the very highest and noblest character, viz., the best interest of humanity; the desire to have justice done to the poorest and humblest who have not the means of protecting themselves from the scourges, such as smallpox, etc., that may devastate and destroy countless numbers as in the past. Smallpox, from being a dreaded scourge, has become a disease seldom seen, and its increased prevalence during the past few years may well be ascribed to our increasing carelessness in vaccination.

Unless we are occasionally wakened up by an epidemic, the tendency to neglect all forms of safeguarding ourselves grows upon us, and we do not like to take the trouble to render ourselves safe. It is difficult to convince people, who have never seen the ravages of smallpox, that it is an essential thing that their children should be vaccinated, (and run the chances of a few days' illness or a very sore arm), for the sake of being prepared for an evil that is unknown to them and therefore entirely unappreciated.

There certainly have been evils in connection with vaccination, but what are the very worst of those compared to an epidemic of true smallpox in an unvaccinated neighborhood.

It would be safe to pay no attention to these anti-vaccinationists and class them in with the followers of Christian Science, the Dowieites, Vitosophists, Osteopathists, etc, were they not such a menace by reason of their assumed position as guardians of the public health. We see very many, apparently sensible people, led off by these fads, so it becomes our duty to impart to them all the knowledge we can on these important questions of health and disease, and particularly along the line of preventive medicine.

Germany has possibly the most compulsory system of vaccination known in the world, and the result is that smallpox is almost banished from the Empire. In 1899, with a population of 54,000,000 there were only 28 deaths, and these nearly all came in from an adjoining country.

If we consider the duty of the true physician is to stand by all measures that tend to promote health and prevent disease, there should be some way then of punishing those doctors who encourage the laity in their foolishness in combating the laws which are intended for their own best interests. Such action is certainly highly reprehensible and it is hard to believe physicians of any school could be guilty of talking such " utter nonsense " as was attributed to them at one of their anti-vaccination meetings.

It is quite probable that Dr. Councilman's great discovery of the germ that causes smallpox will assist us in a short time to a better understanding of the rationale of vaccination.

Two years ago the then president, Dr. McKinnon, referred to the great and serious delay there was in gaining admission to our asylums for cases of acute mania, particularly with those at a distance.

This need never occur at the present time with our long distance telephone facilities, if our physicians are only careful enough to supply sufficient information. In all our asylums, the superintendents are anxious to take in and look after this class of cases, and if applying physicians will but send full particulars, setting forth the urgency of the case, complete papers for admission will be sent at once.

Asylum authorities, as a rule, send the history or application paper to fill up first and then, if the case is a suitable one and they can at all make room, the patient is admitted.

A great many senile cases are sent into asylums which could be looked after all right in their own home.

It is a matter of deep regret that so many insane people are sent to gaol, without first making application to our asylums to see if such can-

not be admitted at once. In the past year, of all the insane that have been sent into Toronto gaol, (and there has been a large number), in only four cases was Toronto asylum asked to admit the patient previous to arrest, and in all of these cases, (with one exception due to overcrowding), although we sent the complete set of papers immediately on application, an arrest was made before the papers reached them, when there was really no necessity for this precipitancy.

Our physicians have a large measure of responsibility in this matter and they should try to prevent any case of insanity being sent to the gaol, unless there is absolutely no room for them in asylums, as is sometimes the case.

A change also should be made in the law, so that two medical certificates would transfer a patient from the gaol to the asylum as they do from outside. In this way prompt action could be taken as against the complex procedure which at present exists.

We are glad to note that the Provincial Secretary, Hon. J. R Stratton, has introduced and passed an act the past session, making it compulsory for all counties to erect and help to sustain County Refuge Homes, one in each county or united counties. If these homes were in every county, our asylums could in time be unloaded of all the chronic, harmless dements, and leave space for those amenable to treatment, or who are a menace to the public or themselves.

So much can be accomplished by proper treatment and so many, apparently hopeless patients, restored to normal or almost normal conditions that it is certainly very sad that all the deranged cannot obtain a fair chance for recovery. We are overcrowded by a class of patients that would be quite safe elsewhere.

If county homes would take harmless dements and the majority of the senile cases, it would leave room for the immediate admission of all acute cases and give opportunity for the better classification and arranging of those under treatment. It would also, if properly looked after, lessen the arrests for insanity and shorten the period of their confinement in gaol when arrested.

It would be well to see the name asylum done away with and the term hospital substituted. An asylum simply means a place of refuge while the term hospital would educate the public to understand that it is an institution for cure.

The medical profession should educate the public, as to the dire results of heredity by misalliances which populate the country with degenerates, a large number of whom afterwards gravitate to the asylums. They also have a very wide field in the way of preventive

treatment of children with a tainted line or lines of ancestry. Much more can be done than is commonly thought to ward off impending evils by early attention to the mental and physical evolution of such children.

The officers and active friends of the Ontario Medical Library Association have made strenuous efforts the past few months to place the library on a more sound financial basis.

There has been a movement on foot to enable the Board to purchase or erect a suitable building in which to store the books, and in which the several medical societies in the city can hold their regular meetings. At the last annual meeting, held on June 10th, handsome subscriptions for this purpose were reported by the Trust Committee, including $1,000 from Prof. William Osler. The amount subscribed by the profession is upwards of $3,600. In addition, between five and six thousand dollars have already been promised by a few public-spirited gentlemen who have the interests of the library at heart. The members of the profession have not as yet been all canvassed. The Board feel very much encouraged in their efforts and hope soon to be able to report further progress, and that the long-felt want will soon be a reality.

Now that the amalgamation of the Universities of Trinity and Toronto seems to be assured, there is greater unanimity than ever among the friends of the library. The feeling is that we should have a large central building which could be used for meetings such as this, in fact, a place where each medical man in the city and Province could feel he had a home. For the present they still occupy rooms in the upper floor of the Medical Council building, which have been provided for them by that body for a number of years. The Board wish to convey their thanks to the members of the Ontario Medical Council and Ontario Medical Association and the numerous private individuals who have generously contributed to the support of the library.

The books on the shelves are now catalogued and members of the Association are requested to take a copy of the catalogue with them, and if they wish to have a book sent them, that can be done simply by mailing a card to the Assistant Librarian and paying express charges.

It will be noted that in order to make the library self-sustaining, as ar as possible, the annual fee of $2 has been raised to $5.

At Gravenhurst, the National Sanitarium Association are continuing the excellent work for consumptive patients of our Province and of the Dominion.

A free hospital has been provided at a cost of $40,000 for the treatment of those who are really unable to care for themselves, as well as for those who are able to pay but a portion of the expense for their care.

No patient has been turned away, providing he was medically considered fit to undergo the treatment there. So that all cases of incipient phthisis, the poorest as well as the richest, have thus a door opened to them which has in many cases proved a door of salvation.

An effort is being made to induce the Government to make a grant of $20,000 towards the latter institution and we cannot conceive of a more legitimate demand on the part of the people for an apportionment of the people's money than one to this cause. It is greatly to be desired that both the public and the profession examine more thoroughly the work carried on, so that all may be more interested in what has proved to be one of the most worthy of our Province.

One of the greatest bars to the successful prosecution of the work from the professional aspect is the failure on the part of the profession to secure an early diagnosis of the condition of a patient.

How long will it be necessary for this Association to call attention to this fact. Happily our minds are slowly awakening to it, though our rising is but slow. The fault is not entirely with ourselves but also largely belongs to the careless public.

As for ourselves, let there be no longer any taint upon our skirts—no partial and unsatisfactory examination of patients—no longer let the ready cough mixture take the place of scientific treatment preceded by systematic and minute analysis of symptoms. To-day, with the enlightenment abroad in the world it is for every practitioner to enjoy the privileges made possible by the indefatigable workers along these lines.

One of the greatest advantages that results to the patients undergoing treatment at Gravenhurst is the knowledge he acquired as to how to live, so that he may prolong his own life and care for, as well as teach others, how to live.

Although the religious periodicals of Ontario have greatly improved in their character, in the medical advertisements published during the past few years, they might go still further and copy the example set this year by one denomination in the United States. The agent having charge of all the advertising in the Methodist periodicals for the whole of the United States has definitely announced that no medical advertisement of any kind will be accepted this year.

Many of these advertisements are not only very immodest, but have an extremely debasing and immoral tendency, and many things are advertised to be used for immoral purposes, but worded in such a way as to keep the advertiser safe from the law, as they admit of a double meaning.

Our public press still pander to this kind of thing, and many of

the advertisements in our daily papers are simply disgraceful and not decent enough to be introduced into a respectable home.

Apart from this, they are all intended to gull the public.

Take for example, the wonderful cures by "The great Dr. Bluff," of Boston, the Electric Belts, Peruvian Syrup, and scores of other fakes of that class.

People who have led immoral lives, chronic sufferers, and the weak-minded generally, are led away by the wonderful results promised in this misleading twaddle. They think there can be some miraculous change performed by these quack remedies, and that they will be restored to health and still go ahead and violate nature's laws in any and every particular.

It is time that our leading journals freed themselves from this prostitution and published clear sheets that have for their object the building up and amelioration of man's condition.

Our medical men themselves, we are sorry to admit, are not always free from dabbling with quack remedies, and it is not to be wondered at when some of the medical journals to the south of us advertise medicines which border on quackery as freely as they do. If we want to retain our own self-respect, and the respect of our professional brethren, we must stand by legitimate medicine. "Prove all things, hold fast that which is good."

We cannot bring our paper to a close without referring to some of the events which have occurred during the year bringing sadness to all our minds.

The rider of the Pale Horse has been busy counting up his roll of victims. We see emblazoned upon the marble shields of his hosts an ever increasing number of names of good soldiers that have been overcome while battling "strong and true."

We, who are thrown into the posts of danger and the vanguard of the forces, must yield our quota of losses—for the inexorable law promulgated in the beginning of time may not be set aside. Though our warfare must always end in defeat until that great day when a new heaven and a new earth appear, and the weapons of our warfare are laid aside, yet we battle on, proud in our strife, because of the glorious possibilities which lie before all seekers after truth. Every true physician desires but to say at least, "I have fought a good fight, I have finished my course," for though the sword of the King of Terror strike us from our places, yet does it but cut the latch which lightly closes the gateway to the Eternal.

Ontario this year, has a long roll of names of those who have gone up from the battle. Of these, perhaps, the most familiar to us all are

those of Spencer, Gordon and Horsey. The first two, because of their long connection with the two medical colleges, in which they did faithful work, and also because of the active interest they took in this Association. The latter, because of the important position he filled, and seemed destined to enlarge in the political life of the Dominion.

The kindly reference to the life and work of Gilbert Gordon in the daily press, with its general estimation of the value of the cultured, honorable and sympathetic practitioner to the community, commands our warm praise, and makes us feel that the oft times overtaxing strain is, after all, worth the labor, if it but brings us so near to the hearts of our fellowmen.

Abroad, one of the Princes of Medicine passed away in the person of the great Virchow, honored by his fellows the world over, by the state and people.

While the veil of the future still hangs before our eyes, and though we stand on this side in what seems to be the full glory of the noon-tide of discovery, yet, ever and anon, there flash out from its impenetrableness gleams of light that seems to us revelations more glorious and full of hope than any which have yet been accorded to this age of rapid advancement.

We rejoice in the history of the past, with its record from the groping of inexperience to the dawn of rationalism.

The progress in our science has carried us from the question, "How shall we treat?" to "How shall we prevent?" and the unfolding of the future will largely concern developments along the line of the latter question.

To its solution this chair again calls your eager attention and effort. No question involving greater issues has ever been presented to the minds of men.

The time demands greater concentration of effort, more systematic methods of study and work, a priesthood in the temple of Galen more intellectual and highly trained than has been found during the past, and these the time will have. Let it be our part to so lay the new road-beds of medical progress that the trains may run no danger of being jolted and hindered by the pine stumps and rocks of the "has been."

"Then let us on through shower and sun,
And heat and cold be driving;
There's life alone in duty done,
And rest alone in striving."—Whittier.

UTERINE MYOMATA AND THEIR TREATMENT.*

By THOMAS S. CULLEN, M.B.,
Associate Professor of Gynaecology in the Johns Hopkins University.

Mr. President and Gentlemen :—

I GLADLY accepted your very kind invitation, not only on account of the great honour you have conferred upon me, but also because it gives me the pleasure of once more mingling with my teachers and schoolmates. It carries me back to my earliest glimpses of medicine, and even now I have vague recollections of sitting on the anxious bench nervously awaiting the results of the University and Council examinations.

The subject I have chosen is a familiar one everywhere, but strikingly so in the South where the negro population is greater. In Baltimore, nearly one-tenth of all gynaecological cases admitted to our wards have been uterine myomata. Dr. Kelly and I have been analyzing the material of the Johns Hopkins Hospital of the last fourteen years, and during that time considerably more than a thousand cases of myoma have been placed on record. In deciding upon the preferable operative procedure in a given case, it is necessary to bear in mind the different varieties of myomata, their situation and size, the various degenerative processes which they may undergo and the complications that may arise. Furthermore, certain symptoms will also serve as a guide for treatment. In order to make the present paper clearer, permit me to discuss briefly these points. The subject is not new but we are every day adding little by little to our knowledge of it.

From the investigations of others as well as from our own studies, it would appear probable that in the beginning nearly all myomata are interstitial. As they increase in size they may remain so, or on the other hand, may push outward or inward, forming subperitoneal or submucous nodules. The number of myomata present in a uterus may vary greatly. Occasionally only one is present, but more frequently seven or eight, and in not a few instances twenty or more can be counted. Again, these growths usually vary much in size. Thus in a uterus there will often be found a myoma of many pounds' weight, while in its immediate vicinity is another myomatous nodule not larger than a pinhead. As we all know, myomata may occupy any part of the uterus, sometimes being located on the surface of the organ or at other times pushing their way out between the folds of the broad ligament. Again, not infrequently they occupy the entire pelvis, and we find the body of

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the uterus lying on the top of them. These are the cervical myomata which at times are so difficult of removal.

Condition of the Endometrium where simple Uterine Myomata exist.

As a rule the cervical mucosa is perfectly normal save for the presence of a cervical polyp or some dilated cervical glands. In the body of the uterus, endometritis is occasionally found, but, when present, is almost invariably associated with inflammatory changes in the adnexa. Tuberculosis of the endometrium is occasionally associated with myomata but rarely occurs independently, and is then usually secondary to a similar process in the Fallopian tubes. Of squamous-cell carcinoma of the cervix and adeno-carcinoma of the body of the uterus we shall speak later.

While any of the foregoing conditions may exist, in nearly all instances the changes present are usually entirely mechanical in their nature. If the myomata are subperitoneal or intra-ligamentary the mucosa is usually normal, provided, of course, that the tubes are unaltered. When the nodule impinges on the uterine cavity the mucosa over the most prominent part becomes stretched and thinned out, until eventually there will remain nothing but the surface epithelium covering the nodule. While this atrophy is taking place, the mucosa in the depressions at the sides of the nodules remains unaltered or becomes thicker, this thickening occasionally being due to simple gland hypertrophy. Portions of the mucosa are often mechanically forced out into the cavity, producing polypi. With the distortion of the mucosa the glands sometimes become blocked, and small cystic dilatations are formed.

When the myoma becomes entirely submucous, it is usually covered by a thin layer of mucosa, but in a few instances we have seen a sloughing focus in the myoma opening directly into the uterine cavity.

Now and then a submucous myoma in the posterior wall will blend with a similar nodule in the anterior wall, obliterating the uterine cavity entirely over a limited area. From an examination of a great many specimens we can lay down the general rule that where the Fallopian tubes are normal, and where no sloughing submucous myoma exists the uterine mucosa is perfectly normal. This fact has no little bearing on the operative treatment inasmuch as the condition of the mucosa is an index of how far we may venture in removing a partially submucous myoma by way of the abdomen. Histological studies, then, having taught us that the endometrium is usually normal, we can in most instances open up the uterine cavity with little or no danger of infection.

Parasitic Myomata.

With the increase in their size the subperitoneal nodules are continually rubbing against neighboring structures and frequently become attached to them. As a rule they become adherent to the omentum, the omental vessels soon furnishing a part of the blood supply and the original attachment to the uterus becoming less and less, until it is finally lost and the nodule apparently springs from the omentum and from it receives its entire nourishment.

Recently, I operated upon a patient giving a clinical history almost typical of an ovarian cyst, but on opening the abdomen I found a myoma about the size of a foetal head. This was attached to the uterus by a very delicate pedicle, while all the omental vessel plunged into its upper portion and supplied nearly all its nourishment. Associated with this partially parasitic myoma was an accumulation of 52 litres of ascitic fluid.

A few months ago, while performing a hystero-myomectomy, I saw nodule as large as a base ball situated at the brim of the pelvis. It lay directly over the ureter as the latter crossed the pelvic brim. Its nourishment came from the mesenteric vessels, and it had absolutely no connection with the uterus. This nodule in all probability had originated in the uterus but becoming adherent to the pelvic brim had gradually changed its source of nourishment until eventually all trace of its former attachment was lost.

Simple Degeneration in Myomata.

Myomata, no matter where situated, often undergo softening. In the first place the tissue changes in color from the characteristic whitish-pink to a white or yellowish-white. Such areas are sharply circumscribed and occupy a varying portion of the myoma. This whitish tissue gradually disintegrates and the spaces thus resulting are usually filled with a clear serous fluid. Sometimes, however, the material is oily in nature, resembling melted butter. As a result of the continual breaking-down of this altered tissue we have large cavities traversed by delicate trabeculae. On histological examination the degeneration is seen to be hyaline in character, and this hyaline tissue gradually melts or fades away, leaving the spaces filled usually with serum but occasionally with the butter-like material. This latter fluid on histological examination is found to contain large quantities of fat droplets and cholesterin crystals. In these degenerated myomata there is usually not the slightest inflammatory reaction and no evidence of infection. This is fortunate since, if perchance we should accidently rupture such myoma during its removal, we

should have little to fear if some of its contents escaped into the abdominal cavity.

Suppurating Myomata.

Occasionally subperitoneal and intra-ligamentary myomata become infected, probably as the result of some degeneration which has permitted the entrance of bacteria. These suppurating myomata have an outer covering of myomatous tissue and are lined internally by granulation tissue. We have seen them containing several litres of pus. In one patient operated upon at the Johns Hopkins Hospital there was a large cavity in a subperitoneal myoma which extended as high as the umbilicus. This cavity communicated freely with the transverse colon, the faeces passing directly from the gut into the abscess cavity.

Sloughing Submucous Myomata.

While the subperitoneal nodules are extending upward and outward the submucous ones are forced more and more into the uterine cavity. Their mucosa becomes thinner and thinner and eventually the dependent portion of the nodule usually undergoes necrosis and sloughing. Sometimes only a small portion of the nodule disintegrates, but occasionally the uterine cavity contains a sloughing nodule fully as large as an adult head.

In one of our cases we found a necrotic interstitial myoma which on its inner side communicated with the uterine cavity. On its outer side it had involved the uterine wall; necrosis had followed, the peritoneum had become involved, and the patient had died of a general purulent peritonitis.

The Tubes and Ovaries in Cases of Myoma.

Let us now briefly consider the condition of the tubes and ovaries and also see the effect of the myomatous uterus on the surrounding structures. In the tubes we have noted hydrosalpinx (simple and follicular), hæmosalpinx, tubal pregnancy, salpingitis, tubo-ovarian cysts and adeno-carcinoma, secondary to adeno-carcinoma of the ovary. Occasionally the normal tubes may be lost on the surface of the myoma and appear again at a distant point. While any of these conditions may be found simple inflammatory adhesions are the most frequent. In all probability the adherent condition of the tube is due to the mechanical irritation caused by its being rotated and rubbed against surrounding parts.

Numerous pathological conditions of the ovary are also associated with uterine myomata. Thus we have found Graafian follicle cysts, both large and small, corpus luteum cysts, multilocular adeno-cystomata, dermoids, papillo-cystomata, primary adeno-carcinomata and ovarian absces-

ses. The ovaries are often embedded in adhesions, usually delicate and fan-like. The inflammatory reaction seems to be chiefly the result of mechanical irritation.

Parovarian cysts are also associated with myomata in a moderate number of cases.

The relation of the *bladder* to the myomatous uterus is also of importance from an operative standpoint. At times it is not at all altered in its position but is often drawn upward and outward, being spread uniformly over the anterior surface of the tumor. In other instances it has early become adherent to the tumor at one point and with the growth of the myoma has been drawn out into a long tongue or funnel-shaped projection. We have seen the bladder drawn fifteen or more centimetres above its normal attachment and in a few instances it has extended upward as far as the umbilicus. The interior of the bladder is rarely, if ever, altered.

If the tumor become incarcerated in the pelvis and pressure symptoms develop the *ureters* are frequently affected First they dilate, giving rise to a hydroureter, sometimes reaching 1.3 cm. or more in diameter. Later on they may become adherent to the myoma and with its continued growth be carried up out of the pelvis. It is exceedingly important to remember this possible displacement when operating. Hypertrophy of the ureter is occasionally caused by the myoma and hydronephrosis may supervene.

Adhesions between the myomatous organ and the rectum frequently take place, especially where the growth tends to become incarcerated in the pelvis. As the growth rises up, it sometimes takes the rectum with it, making it taut and carrying the upper portion high into the abdomen. As might naturally be expected, the intestines which lie in direct contact with the tumor sometimes become adherent to it. As a rule these adhesions are slight, but at times the intestine is so intimately blended with the growth that it is necessary to sacrifice a portion of the uterine wall is removing the organ. Occasionally kinks in the bowel follow as a result of adhesions and the patient dies of intestinal obstruction. The appendix in many cases has dropped down and become adherent to the tumor or to the right tube and ovary.

Adeno-myomata of the Uterus.

We will now consider a variety of myoma which until very recently has received little attention. In these cases we have as a rule a uterus which is moderately enlarged, but which conforms to the normal contour save for some small nodules scattered through-

out its walls or over its surface. On microscopic examination we find that the inner muscular layers of the uterine walls have become coarse in texture and converted into myomatous tissue. Into this coarse-textured tissue the uterine mucosa literally flows. We thus have myomatous tissue with islands and rivers of normal uterine mucosa scattered throughout it. With the gradual growth of the adeno-myoma portions of the mucosa are nipped off and either become submucous adeno-myomata or pass to the outer surface, forming subperitoneal nodules. The islands of mucosa in the myomata still retain their natural menstrual function and hence at each period pour out their quota of menstrual blood. Naturally where the nodule is subperitoneal and the glands are surrounded on all sides by myomatous muscle there is no escape for this flow. It thus accumulates and eventually we have the myomata containing large cyst-like spaces lined by a smooth velvety mucosa and filled with chocolate-colored fluid—the dammed-up, changed menstrual flow. In nearly every instance in which we find a large intra-ligamentary or subperitoneal myoma containing such cyst-like spaces and filled with chocolate-colored contents we may ascribe it to an old adeno-myoma. Adeno-myomata of the uterus were found in nearly two per cent. of our cases. They are benign.

Sarcomatous Degeneration of Myomata.

Within recent years studies have definitely established the fact that myomata may undergo sarcomatous degeneration. Clinically, patients suffering from such growths usually give a history of several years' duration, during which the growth has either lain dormant or increased very slowly. Suddenly there is renewed activity and in a few months the myoma increases greatly in size and more or less marked signs of cachexia begin to appear. Sarcoma usually develops in one of several myomatous nodules and may be subperitoneal, interstitial or submucous, although it was formerly thought that such growths were always of the last-named variety. If the sarcoma develops in a submucous myoma portions of it may from time to time be expelled through the vagina—the so-called "recurrent fibroids." The sarcoma may develop from one of two sources, the connective tissue or the myomatous muscle cells. If it originates from the stroma the sarcoma may be spindle-celled or round-celled; if from the muscle, it is of the spindle-celled variety. From the drawings which are being passed, any one will be able to convince himself that a sarcoma may develop in the centres of myomata and from the histological pictures it is possible to trace all stages from the normal muscle fibres to those which show the typical ear-marks of sarcoma.

We have had several such cases in our series where the myomata became sarcomatous and in some of them death soon followed from metastases. It is of extreme importance to remember these cases when weighing in our minds the appropriate mode of treatment.

Carcinoma of the Uterus Associated with Myoma.

In my work on Cancer I reported several cases of carcinoma of the uterus occurring in conjunction with myomata, and in the three years intervening since the appearance of the book a goodly number of similar cases have come under my observation. Of course, where squamous-celled carcinoma or adeno-carcinoma of the cervix exists it will as a rule be readily detected before the operation and we will thereby be influenced in our mode of treatment. In the majority of the cases, however, where cancer of the body of the uterus has existed, it has not been suspected until the uterus had been opened after operation. Nor need such ignorance be unpardonable; for in all probability the only suggestive symptom has been haemorrhage, which naturally would be explained as belonging to the myoma. One would hardly deem it necessary or wise to curette when the myoma could be so clearly outlined and considering the fact that the uterus is to be removed in so short a time. Nevertheless, when outlining the treatment one should always bear in mind the possible coexistence of a carcinoma of the body of the uterus and act accordingly

Symptoms of Myomata.

The clinical features in cases of uterine myomata are mainly dependent on two chief factors. First: The situation of the nodules. Secondly: The size of the tumor. While these growths develop during the child-bearing period, they may not make themselves manifest until late in life. A myoma may be as large as a foetal head and yet give no symptoms whatever and be only accidentally detected. On the other hand, a nodule not larger than a walnut may give rise to alarming haemorrhages. If the myomata are interstitial or subperitoneal and so situated that they do not encroach on the uterine cavity, there will, as a rule, be little bleeding. On the other hand, if the myoma projects into the uterine cavity, thereby putting the mucosa on tension, there will undoubtedly be very free and troublesome haemorrhage. The amount of bleeding is usually in direct proportion to the surface area of the uterine mucosa on tension. We have had patients lose nearly two litres of blood at one time, and in one case I was called in to see the uterine cavity was 24 cm. in length and contained over a litre of decomposing blood-clots.

In the cases in which the myomata encroach on the uterine cavity the patient will usually give a history of prolonged menstrual periods for the last few years and will complain of some backache and often of a feeling of bearing-down pain in the lower abdomen. After suffering from these symptoms for a time she suddenly notices a lump in the lower part of the abdomen. With this increase in size there may be an increased frequency in micturition or retention due to the bladder being jammed up against the symphysis pubis. With the continued growth of the tumor constipation becomes marked and possibly pruritus ani develops, both due to the pressure of the growth on the rectum. Later on the woman suffers from pain and occasionally notices oedema in one or both of the lower extremities. I recently operated upon a patient who had an interstitial myoma about the size of a child's head. The pressure symptoms were such that when lying down she had to be assisted to rise, although, when once on her feet, she had no difficulty in attending to her household duties.

With the continued enlargement of the myoma the abdominal contents will be forced upward against the diaphragm and shortness of breath will naturally follow.

In those cases in which sub-mucous myomata exist, as evidenced by the prolonged menstrual periods or menorrhagia, the hæmorrhage usually increases in amount, and between the periods of bleeding there is a purulent or muco-purulent discharge. In some instances, the sub-mucous myoma is forced more and more into the uterine cavity and after a time projects slightly through the external os. At this time, there is often a loss of substance over the most dependent portion of the tumor. Necrosis of the nodule now readily takes place and we have in addition to the hæmorrhage a continual watery and most offensive vaginal discharge, in odour and appearance often strongly suggesting that common in cancer. The long drain on the patient's resources saps her strength and she becomes sallow or very anæmic in appearance and may have irregular elevations of temperature due to the damming-up in the uterus of purulent fluid, or to a septic focus which has meanwhile developed in the Fallopian tubes or in a neighboring myomatous nodule. The hæmoglobin at this stage is often below 30 per cent There are hæmic heart murmurs, and the patient suffers from giddiness and fainting spells. Under such conditions she is now forced to spend most of her time in bed. Such is frequently the clinical history in the severe cases of myoma. In addition to these symptoms, we must remember those occurring where intestinal obstruction or appendicitis supervene or where the development of ovarian cysts or extra-uterine pregnancy add to the complications.

Vaginal Examination:—While much may be learned from the clinical history, nothing gives such a clear idea as the bi-manual examination. In a simple case, the finger in the vagina finds the cervix to be of normal size, while with the abdominal hand one or more hard nodules are to be felt rising up out of the pelvis, and on making pressure upward from the vagina we are able to determine that the mass is directly continuous with the cervix. This also enables us to determine the mobility of the tumor and also sometimes permits us to say with a fair degree of certainty whether the growth is adherent or not. In not a few instances, we find the cervix jammed up against the symphysis pubis, and the posterior vaginal vault bulging downward due to the choking of the pelvis by the tumor. If the growth be cervical, the cervix has often unfolded itself on the surface of the myoma and is flush with the vaginal vault. In such a case, the external os is often recognized as a semi-lunar slit 2 or 3 cm. in length.

Where a sub-mucous myoma exists, the cervix will often admit the finger, and the nodule can be felt plugging the cervical canal just above the external os. If the myoma has already partially escaped into the vagina, the finger comes immediately in contact with it, and on skirting it backward the cervical lip is felt as a tense band hugging the outer surface of the growth.

Where the myoma is necrotic and has been sloughing for a long time we may find a tough but soft, slimy mass projecting from the vaginal outlet. Such tissue bears a striking resemblance to raw beef that has been macerated in water for some length of time.

Gentleness should always be exercised while making vaginal examinations. In at least two instances on opening the abdomen I have found that during the examination, just prior to the operation, subperitoneal nodules had been torn from their pedicles, and that from the rent there had been free hæmorrhage into the pelvis. In both of these cases several persons had examined the patient and evidently too much force had been used. Where the operation was performed at once, as in these cases, the injury was of little consequence, but should such an accident have occurred during an ordinary routine examination, there would, in all probability, have been a fatal hæmorrhage.

Treatment of Uterine Myomata.

The surgeon's first duty is to remove the growth. The second, equally important, is to sacrifice the reproductive organs as little as possible consistent with safety. Prior to opening the abdomen a catheter should be introduced to determine the confines of the bladder.

If the *viscus* is high up, the abdominal incision should be commenced near the umbilicus and carefully continued toward the pubes. After having entered the peritoneal cavity and carefully packed off the intestine, the operator should examine the tubes and ovaries, and if these are free from adhesions, the question of a simple myomectomy should be considered.

Myomectomy.

Should the tubes be the seat of an inflammation a hysterectomy should be performed, as there is a possibility of infecting the cavities left in the uterus after the removal of the myomata. Several years ago, over-enthusiastic for conservatism, I did a myomectomy, after having made artificial fimbriated extremities for both tubes. In a few days there were distinct evidences of infection of the uterus. I again opened the abdomen and drained from above and below. The patient lingered for a month and then died. In this case there was in all probability a latent infection lurking in the tubes, although no pus was detected at the time of the primary operation. The operation was a simple one, and had I performed a hysterectomy recovery would, in all probability, have followed

After satisfying ourselves that the appendages are normal, and that there is no offensive vaginal discharge indicative of a submucous myoma or of carcinoma, we should carefully examine the uterus to see if it be feasible to do a myomectomy. Where the nodules are few in number and situated at accessible points, the uterus should be saved. In a few instances we have removed interstitial myomata larger than an adult head, and yet been able to preserve the uterus. If, however, the uterus is everywhere studded with small or medium-sized myomata, there is a great probability that some would be left behind and a subsequent hysterectomy become necessary.

It is not advisable to do a myomectomy where the nodule is situated in the broad ligament or deep down laterally in the pelvis. In these situations it is impossible to obliterate the resultant spaces, and blood is bound to accumulate. These difficulties might be overcome by abdominal drainage, but here hysterectomy is preferable. Several years ago I removed a nodule, the size of a small cocoa nut, from the left broad ligament. The lower portion of this nodule extended far down beside the vagina. There was little hemorrhage, and the tissue apparently fell together nicely. In a few days, however, the temperature rose to 104. Shortly after this there was a free discharge of pus from the bladder, and on examination much induration of the left side of the vagina was found. The abscess had opened into the bladder. After several weeks the abscess cavity closed and the patient is now, six years

after operation, in perfect health. A similar case was noted by a colleague of mine; in this instance, however, the bladder was not implicated.

Should we decide on myomectomy, the easiest method of controlling bleeding is by means of a gauze rope applied around the cervix and clamped with artery forceps, thus avoiding the necessity of tying. If the myoma be small, the incision is made directly over it and as soon as the nodule is exposed it is grasped with a meso-forceps and twisted or shelled out. Where the nodule is large and partially sub-peritoneal, a lozenge-shaped piece of muscle is usually excised with the tumor. Care should be taken not to sacrifice too much muscle, as so much contraction may occur that it will be found almost impossible to bring the margins of the cavity together. After carefully palpating the uterine walls to be sure that no other nodules remain and having turned in the mucosa and sutured with cat-gut, should the uterine cavity have been opened at any point, the various cavities are totally obliterated by cat-gut sutures, three or four rows being used if necessary. It is upon this total obliteration of all dead spaces that the success of the operation depends. Often there is bleeding from the stitch holes on the surface. This is usually controlled by placing one or more cat-gut sutures at right angles to the others.

The operator need not be alarmed if the temperature rise to 100 or even to 102 or 103 a few days after the operation. This we have noted very frequently. In such cases dead spaces have undoubtedly been left behind and there soon occurs a disintegration and absorption of the blood.

One should always remember that myomectomy is a much more dangerous operation than hysterectomy, and if the patient be weak or any other contra-indication exist the complete operation should be chosen. The latter operation is the one of choice after the menopause, myomectomy being applicable during the child-bearing period.

The operator should also bear in mind the possibility of leaving some myomata behind. I recently saw in the dispensary a patient on whom myomectomy had been performed nine years previously. She had been perfectly well for several years, but when admitted to the hospital a second time the uterus was fully five times the normal size and everywhere studded with myomata.

Where the resultant incision in the uterus is long and it is necessary to hold the organ up on account of its large size, intra-abdominal shortening of the round ligaments is preferable to suspension. I am familiar with a case in which, following a myomectomy, the uterine incision became intimately blended with the abdominal wall over a wide area.

Pregnancy followed, Caesarian section was performed and the patient died. Suspension in such a case is an entirely different problem to the simple operation for displacement, as in the latter there is no raw surface whatsoever.

I would strongly advise giving the preference to myomectomy in all suitable cases, but in every doubtful instance hysterectomy should be performed.

Hystero-myomectomy with Preservation of the Ovaries.

In those cases in which it is deemed safer to perform hysterectomy, if the patient has not passed the menopause, we should endeavor to save the ovaries. In the first place we have no right to remove normal structures, and in the second place preservation of the ovaries will relieve the patient to a great extent, of the troublesome hot flushes and nervous phenomena naturally associated with the menopause. Thus, where the operation is performed on a woman, say thirty-five years of age, these unpleasant phenomena are generally deferred until the usual time for the cessation of menstrual life or for several years at least. We make it a point to preserve one or both ovaries wherever feasible. Spinelli and others are still more conservative, and whenever possible preserve at least the lower segment of the uterine cavity. In other words some of the mucosa from the body is left *in situ* and the menstrual function, although naturally limited, is still preserved. In the near future it seems probable that this plan of treatment will often be adopted.

In performing the ordinary hysterectomy with amputation through the cervix it is always well to remember the blood supply of the pelvic organs. From above downward we have the ovarian artery and veins easily exposed to the outer side of the ovary. Next comes the artery of the round ligament which, although small, often occasions much oozing, if not tied. On freeing the folds of the broad ligament the uterine artery with its accompanying veins is seen skirting the side of the cervix near the internal os. On the opposite side a similar system of vessels is encountered. We may then roughly compare the hysterectomy with amputation at the cervix to an ordinary amputation with four main vessels, the ovarian and uterine on each side.

Where the growth is situated in the body of the organ and the cervix is long, the operation is as a rule quite simple. The round ligaments are first tied and the organ can be lifted still higher out of the abdomen. Portions of the ovarian vessels passing to the uterus are controlled at the uterine horn and the uterus is freed on each side. After opening up the broad ligaments laterally and separating the bladder reflection

anteriorly, the uterine vessels are readily exposed and tied. Many operators employ only cat-gut for the uterine and ovarian arteries. We still feel much safer with silk, and always use it for the larger vessels. After tying the uterine arteries, taking of course good care not to include a ureter in the ligature, we cut through the cervix, encountering little or no bleeding except from the tumor. We usually cup the cervix slightly and then close with cat-gut sutures. Only occasionally is the cautery introduced into the cervical canal. The broad ligaments are then closed with continuous cat-gut sutures, care being taken to cover over the stumps of the appendages. The bladder peritoneum is drawn over to that of the posterior surface of the cervix. The pelvis now presents a perfectly smooth surface, offering little opportunity for the subsequent development of intestinal adhesions.

Hysterectomy with Removal of the Appendages.

If it has been deemed advisable to remove the ovaries, the operation is carried out in precisely the same manner, save that the ovarian vessels are tied just before they reach the ovary instead of on the uterine side.

While many hystero-myomectomies offer little difficulty, others are by no means so easy. Sometimes the growths are exceedingly large and so distorted that it is at first hard to get one's bearings. Under such circumstances it is always advisable to seek out the round ligaments and sever them at once. This invariably renders the tumor more mobile. The left tube and ovary are then usually tied off and the tumor rolled outward and to the right, as recommended by Dr. Kelly. The uterine vessels on the left side are now controlled and severed, and the cervix is cut across with the upright slant so that the cervical stump, and consequently the uterine vessels left on the right side, will be longer. Clamps are applied to the right ovarian vessels and the entire tumor is removed *en masse*. It is astonishing with what ease an otherwise difficult operation is rendered comparatively simple by this "from left to right" operation of Kelly. Great care must be taken with the ureter and if the operator has the least suspicion that one or both have been injured he should seek each ureter as it crosses the pelvic brim and follow it through the pelvis and carefully outline it to its vesical insertion.

Several months ago I had a very difficult hystero-myomectomy in which the patient was exceedingly anaemic and the vagina was filled with a very vascular submucous myoma. While liberating a subperitoneal nodule adherent to the right pelvic brim, I found it necessary to tie the ovarian vessels. There was only one point at which the vessels could be controlled and that merely wide enough for a single ligature.

After having emptied the pelvis I felt rather uneasy about the right ureter, although no suture had been placed anywhere near the usual ureteral site. As a matter of fact the ureter had been included with the right ovarian vessels. It was released with ease and the patient made a perfect recovery.

Sometimes the ureter is carried up out of the pelvic cavity by large tumors and there is great danger of it being tied or cut. If, after tying the round ligaments and releasing the tube and ovary, the blunt dissection be carried down close to the uterus, the danger is minimized. In some instances it may be necessay to perform a preliminary myomectomy, thus diminishing greatly the size of the uterus and allowing the ureters to drop back into their normal position. The same result may be accomplished by bisection of the uterus.

Bisection of the Uterus.

In not a few instances, on opening the abdomen, the operator is confronted with a very discouraging problem. The pelvis is filled with a nodular tumor glued everywhere to the omentum and intestinal loops or firmly wedged in the pelvis. In some of these cases it is next to impossible to gain a point of cleavage, and were it not for bisection of the uterus the operation would either have to be abandoned or the resultant injury to the intestine from the difficulty in the separation of adhesions would be so great that the chances of the patient's recovery would be minimized. In such difficult cases the uterus is firmly grasped with mesoforceps on each side and the organ is boldly split in the middle. As the incision is increased fresh mesoforceps grasp the uterine walls on either side, and eventually the entire organ is separated into two halves or divided as far as the cervix. We would naturally expect to see injury to the surrounding parts, but by this operation we reach the adhesions from their under surfaces where they are lightest. You would also naturally expect much haemorrhage, but if the uterine halves are kept taut with the mesoforceps little danger from this source is to be feared.

With the uterus now in halves the respective portions are removed entire or amputated through the cervix, the vessels being controlled in reverse order to the usual method, namely, first the uterine, then the round ligament and finally the ovarian vessels. The remainder of the operation is completed in the usual way.

Abdominal Hysterectomy with Preliminary Amputation through the Cervix.

In a certain number of cases, in which the adhesions are so great that bisection of the tumor is not feasible, it may be possible

after severing the round ligaments to push down the bladder so that the cervix is exposed. The uterine vessels are then clamped on both sides and the cervix is cut through. The cervix is then drawn strongly forward and Douglas' sac is opened from below. The broad ligaments are then clamped and the tissues cut. The cervix is now drawn still further upward and all the adhesions are gradually separated from the under service. The ovarian vessels are clamped on each side and the tumor is delivered. In these desperate cases all vessels have been clamped and the organ is removed without a ligature having been applied. The vessels are tied with silk and the operation is completed in the usual way.

Where the intestines are densely adhered to the tumor, always sacrifice part of the myoma, or its overlying layer of uterine muscle as the case may be, leaving it attached to the intestines. This raw flap adherent to the gut is now turned in on itself in such a manner that the bleeding is checked and a smooth surface left.

Complete Abdominal Hysterectomy.

While amputation of the cervix is usually preferable, first, because it is easier, and secondly, on account of the remaining portion of the cervix forming a good firm support for the vaginal vault, still in not a a few instances the complete operation is clearly indicated. For example, where a large cervical myoma exists there is often no normal cervix left and the growth has so encroached on the vagina that a small cuff of this must also be removed. In these cases, after tying the uterine arteries low down near the ureter it is not very difficult to free the mass on all sides until the vagina is exposed. In every case, however, where there is great danger of injury to the ureters these should be carefully outlined to see that they are intact.*

In all cases in which we suspect co-existent adeno-carcinoma, or the development of sarcoma in a myoma, splitting of the uterus should never be performed, as we run the risk of not only implanting cancer or sarcoma cells upon healthy tissue, but also of setting up a general peritonitis, as in these cases virulent pus organisms are very liable to be present. Knowing that we may at any time encounter malignant growths in the uterus, when we are operating for myoma, I have made it a rule where the uterus has been amputated at the cervix to always have the organ opened at once, so that, if perchance, a malignant growth exists, the cervix may also be removed before the abdomen is closed.

*Doyen's operation where Douglas' sac is opened, the cervix firmly grasped and drawn backward and upward and then freed from the vagina on all sides and the uterine vessels are clamped and cut, is also a method of complete hysterectomy to be strongly recommended.

Treatment of Myoma Complicating Pregnancy.

If pregnancy occurs when the uterus is studded by large and small myomata, which apparently encroach on the uterine cavity to such an extent that they almost preclude the possibility of the pregnancy advancing over a few months, hysterectomy should undoubtedly be performed, irrespective of the ovum. In other cases in which the myoma is cervical, and so plugs the pelvis that labor through the normal passages is impossible, the question should be laid squarely before the family, and the alternative of complete hysterectomy at once, or Cæsarian section at term, followed by hysterectomy at a later period discussed. The uterus might possibly be removed immediately after the Cæsarian section, but the parts are so vascular in the pelvic floor, and a large cervical myoma is often so difficult of removal that no fixed rule can be laid down, and the surgeon must use his own discretion in the individual case. Recently I saw a patient who was eight months' pregnant, who had a myoma as large as a child's head, situated in the anterior uterine wall. Three surgeons were sure that Cæsarian section would be necessary; two considered normal labor possible. All preparation was made for oparative interference, but the patient fortunately had a normal labor.

Treatment of Submucous Myomata.

Where the submucous myoma is small, and situated far up in the body and no discharge exists, it will often be advisable to open the abdomen, split the uterus and remove the nodule sewing up the rent in the uterine mucosa, and then uniting the muscle. If the myoma projects through the cervix where it can be grasped, it is often possible to bring it down, and we can control the pedicle by two or three cat-gut sutures. If it be impracticable to reach the pedicle, the cervix may be split anteriorly until the necessary exposure is obtained. If the nodule is very large and fills the vagina, delivery by obstetrical forceps is at times feasible; but as a preliminary measure it may be necessary to incise the peritoneum to obtain the requisite space.

In a recent case the vagina was completely filled by the growth and the haemorrhages had been very profuse and frequent. I endeavored to build up the patient but without success. We waited until within a few days of the next period so that she might rally somewhat. On attempting to wash up the vagina the haemorrhage was alarming. I accordingly desisted and opened the abdomen at once, fearing that any more vaginal interference until the uterine vessels were tied would render her pulse-

less. After all the blood supply had been cut off, the nodule was readily drawn up through the abdominal incision with the accompanying multinodular myomatous uterus.

Where a sloughing submucous myoma exists, the utmost care is necessary. If there be little bleeding, it will be safe to delay operation a few days and frequent douches of a 1 or 2% formalin solution should be given. Where there are no other myomatous nodules and where the offensive discharge has ceased the myoma may be treated as a simple submucous nodule and removed. If, however, the uterus be large and studded with other growths, the cervical lips may be sewn together, the vaginal portion of the growth having been removed some days previous. The vagina is then thoroughly douched with a 2% formalin solution and bichloride and complete abdominal hysterectomy performed. Unless the chances of infection from the uterine cavity be reduced to a minimum, the probability of general peritonitis is great.

When not to Operate in Cases of Uterine Myomata.

It is only after studying many cases and following, as it were, their life history that we can get the true perspective and determine with any degree of accuracy when to operate, or in what cases it would be better surgery to refrain from interference. This is especially the case when considering the treatment of uterine myomata. We all know of patients who have had myomata for many years and yet suffered no inconvenience whatever. Others have experienced some trouble, but not sufficient to interfere with their daily work. Judging from these cases alone we would naturally infer that no operation would be necessary unless the myoma attained very large proportions. From our work on the subject, however, we find that unpleasant consequences may follow ultra-conservative treatment. In the first place we have seen that uterine haemorrhages often become profuse and frequent, occasionally amounting to from 1 to 2 litres at a time. Then again the general health gradually yields under the constant loss of blood. After a time pressure symptoms not infrequently develop, accompanied by gradual interference with locomotion. Again, we have to bear in mind that these growths may be so situated as to effectively prevent a normal labor. With the formation of adhesions there is some danger of intestinal obstruction and an operation, where such a complication exists, is most unpromising. Finally, we must remember that in fully 1 per cent. of the cases sarcomatous degeneration of the myomata occurs,* and in another 1 per cent. carcinoma

* This is a very conservative estimate as some have noted it in 2 per cent.

complicates myoma; so that in practically 2 per cent. of all uterine myomata a malignant growth also develops at one period or another.

The Operative Results in Myoma Cases. It is not many years since the mortality in simple myoma cases was excessive. To attempt removal of a large and adherent myomatous uterus was rarely undertaken. But during the last decade the technique has been so perfected that in some clinics the mortality in simple cases is not over 3 per cent., and in Naples last fall, Professor Spinelli informed me that he had just operated upon 100 cases with a mortality of not over 1 per cent.

With such advances in surgery, bringing with them so marked a decrease in the mortality of these cases, have we the right to advise against operative interference with the possibility of hæmorrhage, loss of health, pressure symptoms, septic infections, intestinal obstructions, staring us in the face and even the remote likelihood of sarcomatous degeneration or of carcinoma? And this is not all. When giving our verdict in this or that case, it is on the assumption that our diagnosis has been correct. Unfortunately, we are not infallible. Less than seven weeks ago, I saw in consultation a patient complaining of slight hæmorrhage and with a uterus about twice the natural size, rather firm and feeling exactly like a small uterus containing a nodule the size of a small apple. To clinch the diagnosis were two small nodules, each about 2 cm. in diameter, one on the posterior surface of the uterus, the other at the right cornu. She asked if it were cancer and I informed her that it was without doubt a myoma. On account of bleeding, I advised hysterectomy, and to my surprise the growth proved to be an adeno-carcinoma of the body of the uterus, while the two supposed small myomata were situated at points at which the cancer had extended entirely through the uterine walls, forming secondary growths on the surface of the organ. They were already adherent to the small intestines. With my eyes closed, and that uterus in my hand, I should undoubtedly have diagnosed the case as one of myoma.

Nor are these cases by any means rare. I removed a uterus, the size of a four-months' pregnancy, two years ago and to my surprise on opening it I found it the seat of an extensive nodular carcinoma, no myoma being present. Two weeks ago one of my colleagues removed a uterus about the size of a four-months' pregnancy. Pregnancy, however, was absolutely excluded and the specimen was sent to the laboratory with the supposition that the growth was a myoma. On opening the organ, we found a cancer just above the internal os. This had blocked the cervical canal, and the uterus was distended by fully 500 cc. of blood. On three different occasions I have opened the abdomen expecting to find

myomata. In each the history was absolutely against pregnancy, but upon this we cannot rely in the majority of the colored race. In each of the three I carefully made an incision until the nodule was detected and then did a hysterectomy. These are but a few instances of the difficulties that arise in making an absolute diagnosis in cases in which myomata are suspected.

After a careful study of many cases and finding that the operative mortality is as low as, or even lower than that which follows where patients are not subjected to operation, I feel that the only patients that should be advised against operation are those who exhibit no symptoms or where the myomata are very small and give rise to little or no trouble.

I am afraid my remarks have been too lengthy, but the subject is a very important one and merits, I feel, all the time you have so kindly allowed me to occupy.

THE TREATMENT OF PNEUMONIA *

BY J. H. MUSSER, M.D., PHILADELPHIA,
President of the American Medical Association, Etc.

MR. Chairman and Gentlemen of the Association: My object in presenting the subject of the treatment of pneumonia is two-fold; first, I wish to use it as a means of showing a scheme which I am very fond of and which, in all probability, is common to all. I mean to say that all of us should have some formula fixed in our minds when we take up the consideration of the management of a case which is so comprehensive that when we leave that patient for a time we are satisfied that everything has been done for the patient's welfare. That applies especially to those who are engaged in consultation work, but not only the consultant but the general practitioner, it seems to me, cannot be too precise in following out such formula, and the one which I wish to present to you has been to me rather satisfactory and comprehensive and is a good working formula, so that those who are teachers, I think, may find in it a practical way of presenting the subject of the treatment of any given disease. Secondly, I bring the subject of the treatment of pneumonia forward because it is a practical one—one that comes home to us almost daily—and therefore one that should invite discussion among all, and certainly it is one that we cannot think too much about.

The formula that I refer to, or the scheme that I have, is that when I see a patient suffering from any ailment whatsoever, I start out by

* An address delivered before the Ontario Medical Association, 17th June.

laying down plans for the management of the case in accordance with the indications which I classify under five major divisions; first, indications derived directly from the diagnosis; second, indications for treatment based upon our conception of the morbid process; third, indications for treatment based upon the symptoms; fourth, indications for treatment based upon the results of our examinations of the other organs and structures of the body, not related to the disease; and fifth, indications for treatment based upon facts derived from the social history, the family history and the previous medical history.

Now I shall at once pass over the general plans of treatment of cases of disease that we have. I shall not take up the effect of good nursing, of diet and matters of that kind, but at once dwell upon the subject in accordance with the outline I have given.

1 Treatment based upon the diagnosis. Now, in some diseases—I need scarcely name them, malaria, syphilis, diphtheria and a few other diseases—as soon as the diagnosis of the special ailment is made, a line of treatment comes before us; it matters not what the conditions may be, what the symptoms may be, what the state of either organs or structures. We know in the case of diphtheria we have to give anti-toxin. I know of no circumstance which should excuse its use. In malaria we must give quinine; and in syphilis, mercury and iodides. This is treatment based upon the diagnosis. Is there any specific in pneumonia? We have in modern days struggled after a specific, and tried to think that the serum is of some value. I have used it considerably, but am free to say that as yet I cannot see that it is of any special value, and therefore I cannot recommend the anti-pneumococcic serum. I must say, in justice to some of my colleagues who have used the specific remedy that they have felt they did see some good come out of its use. Two years ago I used it quite considerably, but last year I did not use it because my experience did not prove to me it was a satisfactory remedial measure. It is true, those who have studied it closely do not recommend it. They say a pneumo-coccus infection is of such a character, that we cannot well hope for a remedy that will counteract the toxines in the blood. With this expression of opinion as to the specific medication, I go at once to a treatment based upon our conception of the morbid process of the disease.

2. Of course it is an infection and in consequence of the infection there is an inflammation, and, in consequence of this, toxines are manufactured and a toxaemia rapidly develops. Our first thought is, as soon as we have a case of pneumo-coccus infection, whether we are sure or not of the localization of the seat of the infection in the lung; but

the temperature, the cough, the sputa, and the phenoma which we know so well make it morally certain that we have to do with a pneumonia, although the physical signs are wanting. In such instances we should at once go at the lung, hoping that we may control or modify the extent of the inflammation. I am one who believes thoroughly that we can do a great deal by this means, and hence as soon as I feel that the patient has been infected, that the lung is the seat of the infection, I dry-cup my patient freely, even though I am not sure whether it is at the base or the apex. I do not hesitate when respiration increases to 40 or 50 to cup the patient. I not only do this once but repeat the cupping at the end of 12 hours, if there is increased respiration or other symptoms. I not only cup at the end of 12 hours but again the next day. I cup pretty extensively, and, as I shall explain later, it not only modifies the extent of the inflammation but also, and very largely, relieves many of the pulmonary symptoms.

There is with the infection, high tension pulse and all the general phenomena that attend an acute inflammatory process, so that if we limit blood pressure we are also going to limit the extent of the inflammation, hence I resort to mild purgation, and I give at once calomel, as soon as I am satisfied that the patient has a pneumo-coccus infection, with the object of securing a lower blood pressure. There is always in these cases a gastritis, as indicated by the vomiting and the furred tongue. If I administer it, I think I am also disinfecting the upper respiratory air passages and also modifying the infection; and, secondarily, limiting the manufacture of toxines. I think, therefore, we have the best grounds in the world, from the nature of the process, to give a dose of calomel and follow it by a saline, in order that we may, in the first twenty-four hours, secure a mild purgative effect, and then, too, for the reason I want to mention more particularly. I begin at once with the use of water. Probably the first twenty-four hours I use only water internally. I use a large amount. Apply the water externally in every febrile patient by means of a sponge bath, and even use the dip bath if the temperature is very high at first. In this manner the first object is attained that we think is suggested by our conception of the morbid process, namely, the inflammation is to a certain extent limited, and remember, I do not think it is limited by the first cupping, or the second cupping but I think repeated cupping is required in order to bring about a result. I am sure of this, at least, that if cupping is done vigorously we allay the collateral congestion that occurs around the inflammatory area, and thereby prevent an infection of that congested area, which will certainly take place if the congestion is not relieved, and that prob-

ably is all that is necessary to do in a large majority of our cases of pneumonia. From this on it is a matter of good nursing, the moderate use of purgation, the use of water and the proper diet that I have mentioned.

But there are other indications derived from our conception of the morbid process. The manufacture of toxines goes on. We must limit this manufacture of toxines as much as we possibly can, and we must aid in the discharge of these toxines, the liberation of them from the body, and, finally, we must neutralize the effect of the toxines.

Now we have limited the manufacture of toxines by lessening the amount of inflammation, or by an attempt at least to limit the extent of the inflammation. This, of course, limits the manufacture of toxines. In addition, however, we may limit the manufacture of the toxines by a thorough disinfection of the upper air passages, for there is no doubt that there are many of those micro-organisms which have a normal relation to the upper air passages and soon become pathogenic. Therefore, I start out at once to disinfect the upper air passages. I have said I give a dose of calomel—5 grains on the tongue—and let it slowly dissolve from the tongue to the upper air passages. I think that has a good salutary effect as a local disinfectant. but I am not content with that alone. I want the nurse to use mouth and throat washes. I think it of very great importance to disinfect the upper air passages, as much as we can, in order that we may limit, first, the occurrence of secondary inflammations, and, secondly, the manufacture of toxines in these region.

However, the toxæmia has advanced in spite of our efforts to limit the extent of inflammation. It has been very virulent with extreme toxæmic areas. How are we to liberate the toxines? How are we to counteract their effects? The liberation of the toxines practically means the use of such measures as will keep up to the highest pitch free action of the kidneys. We know from investigation that the toxic qualities of the urine is enormously increased in cases of pneumonia, and we can modify this if we give our patient large amounts of water, if we introduce it into the system by the mouth and by other means. The amount of water that can be introduced into the system by the mouth is more or less limited. We cannot pour water into the mouth all the time. Far better if it is an alkaline water and a water that is mildly laxative. But there are limitations, and, therefore, I want water introduced by other ways. I want it introduced by the bowel, and the best way is to introduce normal saline solutions. Of course, introduce as large an amount as you possibly can, without the bowel being so distended by

the amount as to cause the discharge of the fluid. A pint and a half would be probably quite sufficient.

Then, I do not hesitate to use, and I think we cannot be too assiduous in the use of normal salt solution under the skin. Indeed, so valuable is this that I think the necessary instruments that are required for its use should be a part of the armamentarium of every physician. I do not see how in this present day physicians can get along without their use, and I am sure I have seen the patient's life saved by the frequent use of hyperdermic injections of normal saline solution.

Then, too, I use the water externally. Of course I use ice in the shape of the ice bag, particularly if I can localize the area of inflammation. If I cannot, I am not in a great hurry to use ice, but wait until I know whether it is the apex or the base. If I cannot, therefore, localize the inflammation, and want to use external applications of water, I apply them over the whole thorax, and I use the method of Baruch, and I think that method is one of the most satisfactory methods I know of. I am satisfied it produces beneficial results. I believe it does limit to a certain extent, or helps to limit, the extent of the inflammation; but far better, I am sure it does help to counteract the effects of the toxæmia, or, perhaps I am going too far, it helps to eliminate the toxæmia, because cold applied in the manner Baruch has described, intermittently or constantly, over the surface of the chest, produces a stimulating effect. Consequently, after the application of cold in the manner that Baruch has told us, we see at once that fuller respiration takes place, the cyanosis that has developed lessens, the heart's action, which has been running from 120 to 135, falls to 110 or 100, and there is increased tone in the pulse, so that, in consequence of this, we have better renal elimination. The cold is applied not alone for the local inflammation, but it is also applied because it does help, by virtue of its effect upon the respiratory and circulatory apparatus, in the elimination of toxines.

Limiting the manufacture of the toxines first, and secondly, eliminating the toxines in the way that I have suggested is really the principal suggestion that we derive from our conception of the morbid process. Those of you who want to go a little farther and give medicines, as many do, and I see instances over and over again where it is indicated, can, in addition, for the elimination of toxines use the cardiac stimulants in moderate degrees—strychnine, nitro-glycerine and spirits In a large majority of cases it does not seem necessary to go much farther, but it may happen we are not satisfied with the renal secretion, or with the use of the alkaline waters that are employed, or the use of

the measures I have suggested, and we want to use something more stimulating to the renal function. Under these circumstances I would not hesitate to use sparteine. It is a perfectly safe remedy, while it can be applied by the mouth or hypodermatically, and we are thoroughly justified in using it with the object in view clear in our minds of what we are after, based on the conception of the morbid process.

But in spite of this, the toxæmia seems to be getting control, and we find sometimes it gets absolute control, becomes master of the situation, and it is our aim to counteract the effect of the toxines as much as we can. We have not any direct antidote for this purpose. We must keep up the strength of the patient, and particularly use the class of remedies that are required for eliminating the toxines, namely, the cardio-vascular stimulants that I have mentioned. As to alcohol, use large amounts or small, early or late, preferably not until specifically, definitely indicated, preferably in small amounts, of course, if possible. It is not necessary to give it because it is a food, because the disease does not continue long enough that the patient will waste away, as, for instance, in typhoid fever. Nor is it necessary to give it to cause an appetite, or for general reasons. When we want to give alcohol, give it only when you want to tide the patient over a critical point. Then I don't care particularly to use whiskey or brandy. I don't hesitate to use a small amount, and to use it frequently, so as not to get the toxic effects, as I am sure we do not get from champagne, using it every hour or every two hours during the 24 or the 48 hours of the disease when it is needed. I do not think it is needed through the entire disease in uncomplicated cases of pneumonia. I do not believe it is needed in ordinary cases, only in certain cases, and you want to give a preparation of alcohol that does not depress the patient, hence the use of champagne.

3. Indications suggested by the symptoms. The only symptom possible that requires treatment outside of our conception of the morbid process is pain. Now, pain is a harmful thing. I am satisfied that many patients are very seriously affected by the pleuritis that gives rise to the pain. They are unduly shocked, more or less, and hence I am satisfied it is our business to relieve that pain as quickly as possible. It is only severe within the first 24 hours, and in an uncomplicated case in a person under 45 (I may say probably over 55, because you are all so robust and healthy here) I do not hesitate to use morphine hypodermatically until the patient is relieved. I am satisfied that this within the first 24 hours is a good thing. It is not necessarily indicated unless the patient has pain. Of course, the ice bags employed may be sufficient, the cupping may be sufficient, and, therefore, the first 12 hours I

wait to see if there has been the least relief either from the dry cups or from the ice bag, but if there is not I certainly will not allow the patient to spend the next 12 hours suffering from pain under those circumstances, I am sure we are doing the best for the patient if we give morphine.

4. The next grouping which I shall consider gives us indications for treatment in case of pneumonia. We have made our diagnosis, but we are not content simply with making a diagnosis of pneumonia, it is absolutely necessary that we should know thoroughly the condition of the nervous system, etc. The symptoms that arise are, of course, usually due to the complications. If the pneumonia has occurred in an alcoholic subject, the probabilities are we see very early symptoms of delirium tremens; perhaps, further, we may see that condition called a serous meningitis. When we see the approach of these it puts an entirely different aspect upon the case, and indications for treatment are different. In delirium tremens, I do not hesitate to begin the use of alcohol, and to administer the form the man has been accustomed to. Approaching wet brain, serous meningitis, more or less stupor or coma suggested, probably difficult to distinguish from the comatose condition of toxæmia. This serous meningitis can be promptly relieved by spinal puncture. I have seen the most brilliant results from this treatment. In spinal puncture two or three ounces of fluid from the spinal canal will at once produce a delightful effect. There is no reason why it should not be repeated in 24 hours if necessary. In one of my patients I repeated it three times in 24 hours, and the patient got perfectly well. In other instances, it was not necessary to apply it more than once. You know perfectly well how safe the procedure is and how easily it can be employed, and without anæsthetics or any unusual procedure.

The cerebral meningitis is, of course, a pneumo-coccus infection, and this is the one which is the very best as far as prognosis is concerned. We know the patient is more likely to get well. We save a great deal of time when we employ spinal puncture, but I would not hesitate, I had it done once, to trephine the spinal canal, opening the spinal canal and draining it. It is largely a matter of pressure in these cases, and if you relieve it your patient will have a chance to get well. The pneumo-coccus infection of all the serous membranes is not by any means a grave infection as compared with strepto-coccus or staphylo-coccus, hence our fight is to gain time.

These are the chief indications which arise from an examination or a study of the nervous system. Where there is serous meningitis and we are satisfied this is associated with failure, or with lowered circulation,

as indicated by blood pressure, I don't hesitate to give digitalis. They are the only ones, save those with heart disease, that I give digitalis to. It is of service also, or helps us to gain time in pneumonia, when there is meningitis, that is, the serous forms of meningitis.

Now, as to the gastritis that is likely to occur. It will probably disappear after the first 24 hours. The ice bag, or mustard poultice may be sufficient, or probably cold water coil for a short time will be enough. We cannot give as much water as we would like to give to our patients, but the use of calomel as I suggested will help. If the vomiting continues, I don't hesitate to give some bismuth, etc. It, however, is not usually a grave complication, except in alcoholic subjects.

Far different is the colitis that occurs. I consider we are likely to find an examination of the gastro-intestinal tract this to be a very serious symptom in pneumonia, and one that gives us indications for active treatment. We must not neglect the slightest diarrhœa, the slightest mucous diarrhœa. Probably it will be enough to wash out the bowel with normal salt solution and again with boric acid, but in spite of this there may be three or four passages in 24 hours, there may be a little pain or gradually increasing tympany. That is the one symptom. It is probably an evidence of toxæmia. It is more an evidence of the occurrence of colitis. Of course, for its relief we must manage the colitis as well as we possibly can, and probably better by the measures I have spoken of, together with large doses of bismuth, and with moderate doses of opium.

Nevertheless, the tympany may continue and become the chief symptom. We may feel from the enormous distension of the abdomen, the upward rising of the diaphragm, the dislocation of the viscera and seriously impaired re-action of the heart, that our patient is going to die. The rectal tube may relieve somewhat, passing it high and leaving the nozzle of the syringe in the rectum may be of service. If not, I resort to a remedy which I think I can with great confidence recommend, and that is eserine. It is a powerful stimulant, and has afforded me very great satisfaction in cases of intestinal tympany due to the toxæmia, or to the colitis. I prefer to give it hypodermatically, but if we want to get a local effect in the stomach, we can give tincture of physostigma, or the eserine From the cases in which I have employed it, and from some other cases of tympany in which I have seen it used, I feel satisfied we can place a great deal of reliance upon this drug, and don't hesitate to recommend its use in the management of these very disagreeable complications of pneumonia.

Treatment based upon the results of the examination of the kidneys. I watch the kidneys and renal secretion as much as I do the

lungs. In fact, I don't care very much about the lungs, except to know the respiration rate, but I want to know a great deal about renal secretion, about the amount of urine passed, and the composition of it, and whether there is present or not a nephritis. We want to know within the first 24 hours whether the patient is suffering from chronic Bright's disease, and has got an attack of pneumonia on the top of it, which may modify the whole aspect of the case. It certainly would modify our use of morphia. I would not want to use morphia freely in the case of a person who had a nephritis. I am sure under those circumstances the morphia would probably kill the patient. Therefore, in the first 12 hours, have the urine examination made: Bright's disease first, pneumonia secondarily, or if it is Bright's disease coming on in the course of a pneumo-coccus infection. If the latter, I am not so very anxious. I don't modify my treatment as to the liberation of the toxines. I go more vigorously from the very first. I give all the water I possibly can to that patient in every way I think of giving it. In addition to cupping over the lungs I cup over the kidneys also, and I don't hesitate once in 24 hours to apply a hot bag. I use either a hot bag or a hot bath. I certainly, as I say, watch the kidneys more closely than I do the lung, and I expect by such watchfulness over these organs to get better results than if they were neglected. Other than fearing, therefore, renal insufficiency I pay but very little attention to the nephritis that occurs in the course of pneumonia, because I feel that what I am doing in general is the best thing that I can do for the patient.

Of course, we watch the heart, and the indications arising from the examination of the heart vary with the period of the disease. Of course, I need not say that a person who started out with a bad heart in the beginning, or a patient who has a mild carditis is not managed with the same degree of vigor in a case of pneumonia as the one who had a perfectly sound heart, and yet I would not hesitate to cup such patient, or to bleed. In addition, I use cold sponges and the cold bath from time to time.

It has been shown us by statistics that in the latter part of the disease a time comes when there is dyspnoea. I have seen it occur before the crisis, I have seen it occur after the crisis, I have seen the temperature fall to the normal, the doctor congratulating himself that the patient is going to get well when this comes. There is increased extension of the pulmonary second sound, and you have to relieve the heart or your patient is going to die. He has weathered the storm of the infection, the storm of the toxæmia, but he has now this dilated heart.

Of course, prompt vigorous action must be employed. It is difficult to be quite sure whether you have a right-sided dilatation, or a failing heart from toxæmia, if it occurs before the crisis, and yet, I think, if you have kept a pretty close study of the case, you will be able to satisfy yourself that the dangers that have arisen are due to right-sided dilatation. Then it is I don't hesitate to bleed. I bleed from the arm, I bleed locally. I have used leeches, and have opened a vein. I not only bleed once, but I bleed sometimes a second time in the 24 hours. I take away 6 or 8 ounces, sometimes more. Nevertheless I have seen sufficient relief from 6 or 8 ounces. Relieve directly from a vein in the arm, and then the operation can be repeated if there should be a recurrence of the symptom. At the same time I give cardiac stimulants, strychnine, alcohol, nitro-glycerine and remedies of that character. It will be a considerable shock probably at the time. Two or three doses of atropine may be given. There are times when we have got to act vigorously, to have an enormous amount of faith in medicine, and I am sure we get brilliant results.

There are indications derived independently of the diagnosis of pneumonia. Not only do we have the local pneumo-coccus infection, but in many instances there is either a primary and often a secondary bronchitis, and I am sure we have to look after that particularly in older subjects. Bronchitis may require the usual expectorant remedies, though in a large majority of cases they are not required, but in some cases the use of iodide of ammonia or aromatic spirits of ammonia is valuable as a cardiac stimulant and for its effect on the stomach, etc. The secretion is much more free, but the patient is in danger of choking. I give more stimulating expectorants, such as creasote or that class of remedies that come in very well for the purpose that I am trying to indicate.

The pain of pleurisy and its management has been spoken of as far as we need go. And yet I want to say further that, if an effusion has occurred, as soon as the crisis is over I am one that believes we want to get rid of the effusion. I think it is not good for the chest. It is dangerous, and we ought to get rid of it, so I don't hesitate at all to remove this serum. Of course, if there is pus I not only aspirate but I have the chest opened at once.

5. Facts derived from the study of the social, the family, or the previous medical history. It is hardly necessary to say that the management of the disease is greatly helped by a knowledge of the habits of the patient. We know an alcoholic case, and the indications arise, but the social, the family and the previous medical history does not probably give us many facts upon which we base our treatment, as they do facts

upon which we base our prognosis. The prognosis is very much guided by what we learn in the disclosing of the social, the family and the previous medical history. Nevertheless, in this infection, as well as in other diseases, I do say we cannot keep up a line of treatment, unless we consider the data, not only for diagnostic but for therapeutic purposes that we secure by working up these parts of the history.

Now this brings us to the point, gentlemen, that we are really not treating a case of pneumonia. We are treating a patient who has pneumonia, and that is the most important thing after all. In the case of those of us who are teaching students, it is much more important that we try to impress them with the idea that they are treating patients with disease, rather than they are treating any disease at all; and if we do that, we can have them understand earlier in their career than they otherwise would that it is not necessary in probably 60 per cent. of all the cases of pneumonia to do anything at all except very good nursing, but that in the other 40 per cent. there is a great deal to do, so that it is a good thing to map out a plan of treatment, based upon the five main points I have given to you, and then I am sure they will treat the patient, which is the essential of therapeutics, and not treat the disease.

EXERCISE IN THE TREATMENT OF DEBILITY FROM CHRONIC DISEASES.

By ALEXANDER McPHEDRAN, M. B.
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THE advances made in the treatment of disease in the last decade or two have been mostly of a rational character. Few remedies, or means, of an empiric nature, have been introduced and those that have been added are soon discarded unless they are found to prove of decided benefit. Remedies are sought out and applied because they have ceratin physiological effects, and the aim is to apply these effects to the diseased conditions for which we are seeking a remedy. The truth of these remarks is illustrated by the treatment of tuberculosis by fresh air, rest, and generous feeding. So much has the importance of fresh air in tuberculosis been insisted on, in season and out of season, that it has come to be regarded as of importance only in tuberculosis, and the fact lost sight of that it is quite as necessary in all diseases, especially those of a chronic nature attended by wasting and mal-assimilation. Fresh air promotes increas-

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ed metabolism and better nutrition, and therefore is essential in the cure of all diseases especially those characterized by wasting.

Similar observations may be made in regard to exercises. Through the enthusiasm of the Schott Brothers of Nauheim, systematic exercises have come to be regarded as a *sine qua non* in the treatment of chronic diseases of the heart, and the fact has been overlooked that they were of proportionately great importance in all chronic conditions attended by debility and mal-assimilation. I say proportionately, because many of these conditions are not dangerous to life, although they mar usefulness and render the sufferers more susceptible to the invasion of serious diseases. To appreciate the great importance of muscular exercise in the treatment of heart and other diseases of a chronic nature, it is necessary to have in mind, 1st, the state requiring treatment; and 2ndly, the manner in which exercise affects that state.

In most chronic diseases, there is weakness of the circulation with dilatation of the veins, and therefore an imperfect supply of arterial and a slow removal of the venous blood with the waste products that it carries with it. The lymph stream is also impeded, so that the products of metabolism are slow in being removed and interfere with the local tissue changes.

All the functions of the affected part are also made less active; and not only of the affected part; but also of all the organs—the heart, the organs of indigestion, of excretion, the nervous centre, etc. One cannot suffer without all being affected in some degree. Every organ in the body to be in a healthy state requires to have constantly a fresh supply of nutriment and to have the waste products removed with equal constancy.

This is true of the well no less than of those in defective physical condition. A good old rule says that "the lean should exercise *ad ruborem*, i. e. to glow-point, or until their bodies and spirits are heated, for that will flatten them; and the fat *ad sudorem*. The more luxuriously a man lives, the more active exercise he needs. Want of it, and the costive habit thus superinduced, may extinguish the divine flame of genius and seriously impair the intellectual powers. Hypochondriasis and hysteria are the special punishments of ease and affluence and indolence."

Exercise of a muscle means its contraction during which the bundles of fibres become thicker and filling its sheath, press out the lymph lying in the space between the muscle and its surrounding fascia into the lymphatic vessel from which its return is prevented by valves. As the muscle relaxes, the space between the muscle and its fascia is re-formed,

and, to some degree, aspirates the lymph from the muscle fibres. At the same time the arterial supply to the muscle is stimulated increasing its nutrition, and the venous outflow is increased to a corresponding degree carrying with it also waste products.

The general effect of exercise is to stimulate the heart, so that the current of blood in the arteries becomes more rapid and forcible as shown by the larger and firmer pulse. The venous flow, receiving its impetus from the arterial, is stimulated to a corresponding degree. The general results of such improved circulation are; 1st, increased excretion of the waste products on account of the more rapid blood flow and the improved tone of the circulation in the kidneys; 2ndly, better digestion from the improved circulation in the stomach, intestines, liver, etc., and 3rdly, improved nutrition in all parts of the body from the combined influence of all these improvements. Exercise thus becomes of great importance under all conditions of health and disease, and judiciously taken, is of benefit to all, except those suffering from acute diseases.

The only condition in which exercise has hitherto beem systematically resorted to as a therapeutic agency is in heart failure from chronic disease. At Nauheim so much has been done to place this treatment on a rational basis and demonstrate its efficacy as a therapeutic means that it is now accorded a prominent place in the treatment of chronic heart failure by all writers on the subject. The effect of exercise in such conditions is quite similar to that in any one "out of training." We have all experienced the breathlessness and the faintness and precordial distress caused by a sharp run of a hundred yards or so. This does not arise from anything abnormal in the heart, but only from a want of tone in it. The want of due exercise of a muscle leads to slow removal of its waste products. These products poison the muscle so that it fatigues and loses contractile power more easily. To increase its power it is necessary to gradually increase its work, so as to secure day by day an increased excretion, and therefore a better nutrition, until it has attained its fullest strength. This applies to the muscular system, whether its low power be due to want of exercise or to disease. In either case improvement can be secured only by a "course of training." Perhaps the best illustration of training that can be cited is the old classical story of Milo, the wrestler of Croton, who succeeded in carrying a full-grown bull upon his shoulders with ease by the simple plan of beginning with a young calf, and carrying it every day until it was full grown.

The good effect of graduated exercise in chronic heart disease is widely accepted and advised, but scarcely any reference can be found to the good effect in other debilitated conditions, and yet in none of these

conditions can vigour be regained without due exercise to stimulate general nutrition. In our enthusiasm for certain remedial measures for certain conditions we too often lose sight of the wider application of these measures. The "fresh air treatment" of tuberculosis is the most notable example of this at present; graduated exercises in heart disease is another, although somewhat lost sight of lately in the fervour for "fresh air" in tuberculosis. The necessity for fresh air and graduated exercises in the treatment of all chronic conditions of debility has been almost lost sight of even by the profession, the special application so fully engrossing the attention.

Of the great importance of judicious, varied, systematic exercises in all conditions of debility I am convinced after a considerable experience extending over some years. They should be judiciously applied to the requirements of each individual case, care being taken to avoid overstrain. They should be systematic and not haphazard, so as to call into play all parts of the body in due proportion; and varied as much as possible in order to prevent undue training of some parts at the expense of others, and to add zest to them and prevent as far as possible a feeling of monotony. Not more than a slight or moderate degree of fatigue should be induced, undue fatigue being easily prevented by the exercises being taken deliberately, so that the feeling of fatigue is readily appreciated as it develops.

In the ordinary routine of life the legs receive most exercise, the arms next, and the trunk least; the trunk, therefore, has greater need of attention. Walking is the chief form of exercise taken by most people. Walking as ordinarily done, on the street pavement or on a level road, possesses very little value as exercise. The movement is automatic, and affects scarcely more than the lower limbs. The muscles of the trunk are required only to maintain the body in an erect position, and therefore are little benefited by the exercise. Walking in the woods or over rough ground calls all parts of the body into play, and is, besides, attended by more or less mental exhiliration that adds greatly to the benefit of the exercise. Opportunities for such exercise are not often available, especially for city dwellers, and even to but few country people. Rowing, golf, bowls, horsebacking, tennis, etc, need be named only of course to be highly commended. But even they are only for the few, and to them only at special times. In the debilitated, regular and systematic daily exercise of all the body is necessary if they would make the most rapid progress and the most complete recovery. In chronic heart disease the graduated resistance movements of Nauheim are of great value, and may be followed later with advantage by Oertel's

method of walking up an incline, gradually increasing the distance and the steepness of the ascent day by day as the power of the heart increases and the exercises can be accomplished without a very great strain. Judiciously used, these methods are of great service in restoring tone to a large weak heart.

Of all the causes of general debility imperfect digestion and assimilation are by far the most common, and in their improvement no single means is more effective than proper systematic exercise. In all these cases the abdominal muscles are of poor tone and usually relaxed. The tone of the abdominal muscles regulates the pressure in the abdomen and thus greatly influences the circulation of the blood in the abdominal viscera. The veins in the abdomen are very large and capable of holding almost all the blood in the body. If the abdominal walls are relaxed these vessels will lack their normal support and therefore dilate, with the result that the blood flow will be less vigorous than it should be. Consequently both digestion and absorption will suffer, and, as a result, the whole body will suffer both in its nutrition and excretion. It requires no argument then to prove that every organ and function of the body is affected to a greater or less degree by the state of the abdominal circulation. It is further to be noted that loss of tone in the abdominal muscles favour prolapse of the abdominal viscera, which further impedes the circulation of the blood, and may also impede the onward passage of the contents of the stomach and intestines. We are probably safe in saying that material prolapse of organs never takes place unless the abdominal pressure has been lost through loss of tone of the abdominal muscles. Once the prolapse has taken place, restoration of the tone of the abdominal muscles may not restore the organs to the normal position, but it should, and, so far as my observation goes, always does restore the functions of these organs to a better, if not a normal, condition. As an illustration in proof of this I may cite the following case :—

Mrs. M., aged 45, complained of recurrent attacks of colic. She was very thin, might almost be said to be emaciated, weighing only 94 pounds. She was quite nervous. Her skin was sallow and relaxed ; her muscular system was of poor tone. The abdomen was much relaxed and the muscles so weak that she was unable to raise the head and shoulders from the couch without the aid of her arms. There was marked splanchnoptosis, the lesser curvature of the stomach being at the umbilicus and the right kidney below that level, and "floating." Splashing sounds in the stomach were marked on palpating the abdomen. She was directed to take nutritious food of small bulk ; to exer-

cise all the muscles, especially those of the abdomen, to the point of fatigue, morning and night; to live much in the fresh air; and to take water freely on awaking and retiring, after which the abdomen was to be well massaged and the exercises taken. Her medication consisted chiefly of strychnine and such an antiseptic as bismuth salicylate. She carried out the treatment most thoroughly and cheerfully. In a few months her weight had increased to 115 pounds and she felt equal to any duty. Her abdominal muscles had good power and her digestion was active and comfortable for ordinary diet, although the stomach and kidneys were little higher in the abdomen than they were the year before. She has continued well, but perseveres with the daily exercises, though to a less degree.

It is unnecessary to give other cases in illustration. There is no class of cases, not even the chronic cardiac ones, in whom systematic, judicious exercise should be more widely applicable and more beneficial than in those suffering from the various forms of defective digestion especially of the atonic type. It is quite reasonable that this should be so, seeing that they suffer from loss of tone, not only of the blood vessels and muscular structures of the body generally and of the abdomen in particular, but also of the walls of the digestive tract. Proper exercise will improve the tone of all these structures and will be found one of the most potent agencies in restoring the functions to a vigorous condition. And it is reasonable that such should be the case as the condition almost, wholly depends on a loss of tone, especially in the organs of circulation and digestion. In failure of the heart, exercise has a recognized and important place in treatment; in loss of tone of the digestive system it should have an equally well-recognized and important place. Here it may seldom save the life of the patient, but it has quite as much power in restoring him to health, and the number to whom it is applicable and in whom it will give good results is as much greater as the number of cases of digestion failure is greater than those of cardiac failure. Dyspeptics, like the poor, are always with us, and any agency is important that gives positive aid to their relief.

The beneficial effects of exercise are by no means confined to the heart and digestive organs. In all debilitated conditions there is loss of tone, and therefore the stimulus of exercise to metabolism through increased supply of nutriment and more effective removal of waste cannot but be of great benefit.

As to the manner of taking the exercise, it is not necessary that anything should be said in this place beyond this, that it should never be such as to over-strain or over-fatigue, and that all parts of the body

should duly participate. The most effective exercise consists in somewhat protracted tonic contractions succeeded by rest, as best favoring the removal of waste products and the inflow of a richer blood supply. Many appliances are to be had to aid in carrying out various exercises but they are all open to the objection that they are not always available when needed. Exercise may be quite as effectively and easily taken without any appliances. All that is necessary to make exercise effective is that the muscles be deliberately and vigorously contracted, the vigor used being in proportion to the strength of the person, and increasing gradually as his condition improves. The details of such exercise are beyond the scope of this paper.

Proper exercise is a difficult prescription to have fulfilled, and it is still more difficult to secure perseverance in it use It is, however, much less expensive than massage and much more widely applicable. Fresh air is desirable for all, for the well and the sick, however prostrate. Exercise is desirable for all but the acutely ill and the prostrate, and is, next to fresh air, the most important aid at our command in restoring to vigorous health.

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THE OPERATIVE TREATMENT OF GOITRE.

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GENTLEMEN :—When your Committee did me the honor of asking me to read a paper before you on this subject I decided to confine myself to a brief account of the operation which I have gradually come to prefer. I shall therefore dismiss in a word such methods as dividing the cervical sympathetic, or the use of electricity, about which I hope others may have something to say.

At the outset I think we should lay down some guiding principle as to *when* we should operate. Certainly *all* cases of goitre should not come under the surgeon's knife. For instance, in anæmic girls, about puberty, we have seen rapidly-growing, ill-defined goitres, even producing pressure effects, which have gradually disappeared with or without medical treatment.

Again, no goitre should be operated on for purely æsthetic reasons. It is not a trifling operation, and should not be lightly undertaken by the novice. On the other hand no patient, however desperate her condition, should be denied the undoubted relief which follows the removal

of this obstacle to respiration. In all cases of benign goitre the patient should first be submitted to a course of medical treatment, unless, of course, the symptoms be urgent.

In 1898, Kocher made the statement that 90% of the goitre cases, coming into the hospital at Berne, were so improved by medical treatment as to require no operation.

To sum up, in all cases of benign goitre, solid or cystic, operation should only be undertaken for the relief of definite symptoms. In malignant disease of the thyroid, if an early diagnosis be possible, extirpation of the gland will be the patient's only hope. Unfortunately, early diagnosis is rarely made, and, when seen, the surrounding glands are involved and all hope of a radical cure must be abandoned.

In such advanced cases of malignant disease my rule has been to advise partial removal, only to relieve pressure from the continued growth, and to render possible the future operation of tracheotomy.

In exophthalmic goitre I have operated twice for the relief of urgent pressure symptoms, and have not regretted doing so. In both cases immediate relief was experienced, and the symptoms of the disease ameliorated.

In this class of cases there is greater danger of death from the anæsthetic; and yet, ordinarily, the patient is too nervous to submit to the operation under local anæsthesia. Here an expert anæsthetist is required to co operate with the surgeon. The convalescence is also likely to be decidedly eventful, and to demand watchfulness and keen judgment on the part of the attendant.

Nevertheless, in a case of Grave's disease, failing to respond to prolonged medical treatment, with steady increase of growth, the suffering patient should be given the benefit of operative interference.

Having laid down these working rules as to *when* to operate, the next question to decide is as to *how much* should be removed in a given case. Of course, if but one lobe is involved, only that lobe should be dealt with. I have removed the isthmus alone, when it alone was involved. But, in the ordinary parenchymatous goitre, usually both lobes are unequally involved. At first, it was my practice to remove the whole gland with the exception of a small portion of one lobe. This I now believe to be unnecessary; and, unless both lobes are enormously enlarged my constant practice is to remove only the larger lobe with the isthmus. Following this method, there has been almost invariably a fairly rapid diminution in the size of the lobe remaining: and, of course, all pressure symptoms are at once relieved.

A word as to the *Anæsthetic*.

The ideal in this regard is of course a thoroughly competent local anæsthetic. I know that many men on this continent and in Europe are using cocaine anæsthesia in this operation. But, so far, I have employed chloroform, administered by an expert.

In bad cases of dyspnœa, the anæsthetic is stopped as soon as the skin incision is completed, the operation being continued, with little or no further use of it, until the pressure is removed from the trachea and all danger of asphyxia has passed. I believe that by intelligent co-operation between surgeon and expert, a patient can thus be "nursed" along through the operation without suffering on his part and with the minimum amount of danger. At the same time, being so lightly anæsthetized, the patient, by his unconscious phonation, is able to give us assurance of the safety of the recurrent laryngial nerve.

Now as to *technique.*

The best incision in the vast majority of cases is the transverse, or shallow U-shaped one, extending across the tumor from one sterno-mastoid to the other. The horn of the incision, corresponding to the lobe to be removed, may be extended upward and outward as far as necessary. This incision passes through skin and subcutaneous tissue, platysma and deep cervical fascia.

The two flaps are dissected up and down, and, if necessary, the anterior jugular is cut between ligatures. Next, the pre-tracheal layer of the cervical fascia is recognized and very carefully incised vertically in the median line. Immediately beneath this layer is the capsule of the tumor, and, if care is not taken, this capsule is opened up and the field of operation is flooded with hemorrhage, very difficult to control. In other words, the operation will be a practically bloodless, or a dangerously bloody, one, according as the surgeon is, or is not, extremely careful in working close to, but outside, the capsule.

The opening in the pre-tracheal fascia is enlarged as required, the finger introduced, and, by this means, any adhesions between fascia and capsule are readily broken down. The finger is then swept around the outer and upper margin of the tumor, forcing the pre-tracheal fascia and muscles over the edge of the mass, and the superior thyroid vessels are recognized and cut between clamps.

This usually releases the outer part of the lobe, which may now be drawn forward and still, with the finger as a blunt dissector, everything is stripped away from the posterior wall of the capsule, gradually rolling the lobe over to the middle line. If care is taken to strip everything cleanly and completely from the posterior part of the capsule, the recurrent laryngeal nerve will necessarily be pushed away from the inferior thyroid vessels and all danger of injury to it removed.

The inferior thyroid vessels are tied off, close to the tumor, and the lobe is now completely freed, and we see the rings of the trachea to which the isthmus is adherent. Here there is a decided danger of injury to the trachea, the wall of which is probably atrophied by long-continued pressure. No violence must be used in separating the isthmus and, indeed, I have again and again left a small portion of the posterior, wall of the isthmus, which was adherent to the trachea, rather than risk its separation. The junction of the isthmus with the opposite lobe is now transfixed with silk and tied off, and the mass cut away.

This ligating of the pedide, while unnecessary so far as hemorrhage is concerned, still, I think, serves a purpose in preventing the escape of thyroid-secretion into the wound, which is the probable cause of some rather disagreeable symptoms which occasionally arise during convalescence. Every smallest bleeding point should be tied off with fine silk, and some means adopted to obliterate the huge "dead space," which, in cases of large tumors, is left behind sternum and clavicle.

This cavity is a serious menace to the patient's life from the accumulation and decomposition of secretions. I have found the following method of dealing with it to answer well. With a small fully curved needle, armed with fine catgut, I quilt the anterior and posterior walls of the space together by an over-lying series of running sutures. The first line of sutures will be at the bottom of the space, the next a little higher and so on until the whole space is snugly obliterated to the level of the top of the sternum.

I believe in temporary drainage and now use the method suggested by Cheyne. A button hole is cut through the lower flap, just above the sternum; and a small tube drawn through, the inner end of which lies in the lowest part of the wound, behind the sterno-mastoid.

A provisional suture is placed in this little wound and, when the tube is withdrawn (after 48 hours), is tied. If the pre-tracheal, or sterno-mastoid, muscles have been cut, they should now be carefully reunited and the wound in the pre-tracheal fascia closed. A running suture of fine silk closes the skin-wound, plenty of dressing applied, and the head is supported between two sand-bags. A very important precaution is to direct the nurse to control all violent movements of the head, while the patient is recovering consciousness, and to compress the dressings gently during vomiting. This latter may often be avoided by a hypodermic of morphia, just before beginning the operation.

The tachycardia and high temperature, which are sometimes so troublesome, may be controlled by digitalin and the local use of the ice-bag.

In case of adenoma or cystoma of the thyroid, the procedure just detailed is modified. When the gland is exposed, the capsule is carefully cut through and the tumor, solid or cystic, is enucleated. Of course, some hemorrhage from the capsule is unavoidable, but is readily controlled.

Partial or complete aphonia may follow the operation. It may result from (*a*) tranmatism of the recurrent laryngeal nerve; (*b*) tranmatic tracheitis and laryngitis; or (*c*) hysteria. Usually the difficulty is only temporary. From a medico-legal point of view, it is interesting to note the history of one of my cases. She was a decidedly neurotic maiden lady, aet. 35 years. Complète aphonia followed the operation of removing almost the whole of both lobes in a very large goitre. The vocal cords were pronounced, by the laryngologist, to be cadaveric; and the patient went home improved in every other way, but quite voiceless. Her account was sent her, and, in reply, a rather nasty letter was received, and we looked for legal complications. Suddenly, one morning, *nine months* after the operation, she awoke with her voice fully restored and, among other results, a letter from a grateful patient and a cheque were not the least desirable.

As to the mortality of the operation, that as you know has been steadily declining of late years. I have notes of 33 cases operated upon, three of which were malignant, and two were cases of exophthalmic goitre. I have had no deaths directly following the operation. One of the malignant cases, an old lady of 70, insisted upon going home to the country two weeks after the operation, and, after a long railway journey, died suddenly at her own railway station, I judge from exhaustion. A second malignant case died some six months later from recurrence. The third was a case of sarcoma with very distressing dyspnoea. The operation was a desperate one, artificial respiration having to be carried out during the time she was on the table. She rallied nicely and felt much relieved, but died a week later from uremia. This patient was known to have Bright's disease, but was very anxious for the operation, expressing herself as delighted with the result.

IMPERIAL MEDICAL RECIPROCITY.

The bill, introduced by Gen. Sir J. Wimburn Laurie, M.P., to amend the Medical Act, is designed to enable reciprocal arrangements to be entered into with the Federal or Provincial Governments to facilitate the admission of colonially trained registered medical men to practice in Great Britain, and hold appointments in the Imperial service.

MEDICAL SOCIETIES AND GATHERINGS.

ONTARIO MEDICAL ASSOCIATION.

JUNE 16TH, 17TH, 18TH.

TUESDAY, JUNE 16TH.

Anæsthetics and the Open Air.

Dr. G. H. Carveth opened a discussion on this topic. He advocated open air treatment of all diseases, day and night, acute and chronic cases.

Most cases of anæsthesias are well arranged as regards light, but not as to fresh air. Bad air causes suffering to all parties concerned, and this is the general condition in most hospitals. The room is too hot in which the patient is anæsthetized, operated upon, and recovers in a similar atmosphere, with the result that the patient is exhausted and vomits more than is necessary.

The remedy is anæsthetize, operate and allow the patient to recover in the open air. It has been tried in many instances and works well. The nausea is diminished, or absent, the nurses and doctors feel better.

Dr. Carveth said this can be carried out underneath trees, on a verandah, or in tents. The patient must be clothed in accordance with the requirements of the temperature of surrounding air. The air can be made pure inside a building at the same time kept warm, thus avoiding shock by exposure to cold.

Diagnosis of Uncomplicated Appendicitis.

The diagnosis and operative treatment of Uncomplicated Appendicitis was the title of Dr. T. S. Webster's paper. He stated that there was much difference of opinion as to the possibility of palpating the normal appendix. Feeling with care usually was competent to exclude mistakes as to bundles of the abdominal muscles. The speaker was not misled by these. Under the anæsthetic he can map out the appendix just before operation. He protested against severe purging before operation. His rule was to make a short incision, and to avoid cutting the muscle fibres. He cautioned against tying the sutures too tight; and exhibited his method of putting in sutures, a form of crossed mattress sutures.

Uterine Myomata and their Treatment.

Dr. T. S. Cullen, of Baltimore, read a paper on this—see page 778. Mr. Cameron spoke highly of the paper and the excellent way in which the subject had been handled. He ventured to criticise the changes of myomata into sarcomatous degenerations on technical grounds, along histological lines. Drs. Bruce, Bingham and Temple expressed appreciation of the paper.

In reply to Mr. Cameron, Dr. Cullen stated that the authorities are agreed that there is a direct transformation from a muscle cell to a sarcoma cell by a gradual transition, which can be seen microscopically in its various stages.

The Kidney during Pregnancy.

The above was the title of Dr. Adam Wright's paper. His classification was:—1, Toxaemic Kidneys of Pregnancy; 2, Acute Nephritis; 3, Chronic Nephritis. Dr. Wright did not discuss the relapsing kidney of pregnancy. Special reference was made to acute and chronic nephritis. Albumen is found in from five per cent. to seven per cent. of pregnancies. When albuminuria is found early in pregnancy, it is due generally to nephritis; while in the later months, it is due to the general toxaemia of pregnancy. Dr. Wright asserted that eclampsia is not a result of nephritis, though it may be complicated with it. Mention was made of photophobia and retinal hœmorrhages, complicating nephritis. One case was cited where the woman remained blind for three months. The dangers are increased by keeping the patient for a length of time on a milk diet. Dr. Wright advocated a nutritious diet in such cases. He believed in prohibiting abortion, if possible, unless the mother's life is in great danger, even in the later months, unless absolutely necessary. In the treatment of these cases he advised epsom salts in sufficient quantity to procure four to six evacuations in twenty-four hours in the acute cases; and two or three in the chronic cases. Hot baths and skin friction should be used. The use of hot packs were not recommended. If indicated, give netroglycerin, or chloral compounds. Always use care in the administration of nitroylycerin if the arterioles are dilated. Water is the best diuretic, and should be taken frequently. Tonics are frequently indicated. Strong objection was taken to the indiscriminate use of iron in cases of nephritis, especially if the tongue is furred. In regard to diet, it should be somewhat restricted in acute cases, but it should be nutritious.

Harrison's nephrotomy and Edebohl's decapsulation have been performed. Pregnancy should not be considered a barrier to the operation, if it is indicated in certain cases.

The discussion was opened by Drs. Hunter and E. J. Hastings, both of Toronto. Dr. Hastings emphasized the treatment by Edebohl's operation, citing a case operated on by Edebohl.

Dr. Rice, of Woodstock, spoke of the importance of preventing eclampsia. He referred to the practical value of the paper, and touched upon the former treatment of eclampsia. He spoke of the fact that the condition became serious before the patient consulted her doctor. He strongly advised the free use of salines, claiming that in the past six years his patients have been prevented reaching the eclampsic condition. He believed the usual dose of morphine in the eclampsic condition is much too small. It should be two to four times as great as authors give. He resorted to bleeding when coma was present. Dr. Wright closed the discussion by referring again to the general toxaemia of pregnancy, stating that it was not due to the kidney alone, but rather the liver was first at fault, the muscles and kidneys being later affected.

The President's Address.

The President, Dr. J. C. Mitchell, then read his very able address, see page 767.

Septic Peritonitis.

Septic Peritonitis and its Surgical Treatment by Dr. J. F. W. Ross, was next taken up. He reviewed the history of the treatment of this condition, mentioning the treatment by rest, blood letting and leeches, and by Bates, and later by Dr. Alonzo Clark in their use of opium in such cases. He mentioned the former use of purgation. Most of these cases proved to be not true cases of peritonitis. Since the discarding of drainage in operative cases, the results have been much better. Dr. Ross cited his operations on general purulent peritonitis to show that the best results were obtained in those cases treated with opium, and washing out with normal saline solution, without drainage. Open the abdomen and remove the focus or foci of the trouble if possible. The various pouches off the peritoneum are flushed out with normal saline solution, by means of a trocar. Drainage is not necessary if the source of the trouble can be removed, if not, a gauze drain or glass tube should be introduced. Normal saline should be introduced under the breasts and a rectal injection of about three quarts also given. The object of the treatment is to remove the infective cause of the trouble by means of some chemical which will not have a detrimental effect on the system, and saline solution performs this function better than anything else. The drugs used should act as an antidote or delay absorption, or both. If the secretions of the peritoneal cavity are polluted to a certain extent, there

is more hope of a recovery under this method of treatment. Opium appears to possess this function of delaying the absorption of the peritoneal fluid. The surgical treatment should be followed by medical treatment. In the majority of cases, an operation is indicated, except in some cases of localized peritonitis.

Dr. Bingham acquiesced in all points, except in the results obtained by opium. He believed that death in many cases is due to exhaustion, and was not prepared to admit that death is due to absorption in all cases. He objected to the use of opium on the ground that it tends to paralyze the bowel which is already weakened. The intestines should be splinted by feeding per rectum, not per oram. He closed by saying, "I must object to the use of opium in these cases."

Dr. Hastings also made a few remarks, acquiescing in Dr. Ross' assertions.

Dr. Primrose remarked that it is impossible to render sterile the infected peritoneal cavity; but, to reduce the infection to such an extent that the poison can be combated, and a good result may follow. He cited some cases which recovered after the establishment of drainage, restraining undue movements of the peritoneum.

Dr. Webster made a few remarks confirmatory of those of Dr. Ross, and cited drainage through Dougles' pouch in cases of peritonitis in women.

Dr. Bruce objected to the use of opium, and advocated leaving things alone after operation. He also called attention to the nature of the infection. If the infection is mild, drainage may not be necessary, but in virulent cases drainage should be instituted. In support of this view, he cited certain cases, which did best when opium was not used, and in which purgation was resorted to the second day after operation.

Dr. Ross closed the discussion, mentioning that the results of his present treatment have been better than those of former methods. He believed the opium did good, and that its action was not that of a splint, but that it prevents absorption.

Abscess of the Antrum of Highmore.

A paper on (1) Abcess of the Antra of Highmore, and (2) Mule's Operation on the Eye was read by Dr. Perry Goldsmith, of Belleville. The doctor thought in the case of the eyeball that evisceration would be necessary, but the contents were scooped out and the cavity washed clean with bichloride solution. Mule's operation was performed, and the patient made a splendid recovery with good movements of the eyeball.

The Smoking Concert.

The smoking concert in the evening in St. George's Hall was well attended and thoroughly enjoyed by all. The programme was good, the weather fine, and everyone present lauded the efforts of the committee which had the entertainment in charge.

The Committee on Nominations was elected as follows:—G. A. Bingham, Chairman; A. H. Wright, H. A. Bruce, N. A. Powell, J. A. Temple, J. H. Hamilton, H. C. Parsons, J. C. Mitchell and A. McPhedran.

Wednesday, June 17th.

Two Unusual Nerve Cases.

The first paper of the morning session was by Dr. Thistle, who reported two unusual cases of nervous diseases. The first was a case of facial diplegia. The only cranial nerves affected were the facial nerves, the other nervous mechanism being normally intact. The facial expression, with the exception of the eyes, is blank. The electrical reaction and the other symptoms point to an infra-nuclear lesion. No history of diphtheria could be obtained, The condition of both nerves followed stimultaneously after a drive on a very cold day, and the subsequent symptoms were those of Bell's Palsy.

The second case was one of crossed hemiplegia from tumor in the lateral half of the pons and cerebellum. The nervous symptoms showed a spastic condition of the legs, with exaggerated reflex. The muscular power, especially of the arms, was considerably below par. The face bore the expression of cerebral tumor. Optic neuritis was absent, and the pupils reacted to light.

The autopsy disclosed a tumor involving the lateral half of the pons and the adjacent part of the cerebellum. The facial nerve showed partial involvement at its nucleus.

A few remarks were made by Dr. McPhedran, who enquired as to temperature and reaction of the pupils in the tumor case. In answer, Dr. Thistle said the temperature was slightly elevated before death. The pupils reacted to light and varied in size, usually being markedly dilated.

Exercise in the Treatment of Chronic Disease.

A paper on exercise in the treatment of chronic disease was then read by Dr. A. McPhedran. See page 806.

Dr. Hunter spoke of bicycle riding in cases of hæmorrhoids, varicocele and constipation, and cited the good results following, in four of his cases, the use of the bicycle.

Dr. J. Elliot, of Gravenhurst, spoke in favor of exercise in cases of wasting diseases, making mention of this treatment in the sanitoriums. He advised the more frequent exercise of horseback riding. Dr. Arnott, of London, asked of the older practitioners the results of too much mental strain, combined with exercise.

Dr. McPhedran closed the discussion by referring especially to the value of exercise in tuberculosis.

The Business Aspects of Medical Practice.

Dr. Powell read a paper on "The Business Aspect of Medical Practice." He said there were three requisites to success:

(*a*) To be a thorough gentleman;

(*b*) To be a thorough physician; and

(*c*) To be a thorough business man.

The speaker first pointed out that a physician making $4,000 a year, or more, should have a bookkeeper, in order that his accounts be properly kept, and in witty terms mentioned that a man's best bookkeeper is the maiden whom he chose to manage him. Secondly, he pointed out that bills over nine months' standing should be put in the hands of a competent collector. Thirdly, he recommended the typewriter and the card system. He believed that it is bad business to touch lodge practice at all. By accepting lodge practice a doctor loses his fee-earning power. He pointed out that the physician should be friendly with his fellow neighbor physician. Every medical man needs one or more fads. He defined fads as "mental antitoxins which overcome the poisons generated by cerebral over-activity." He referred to out-door sports, and in humorous terms to golf as "that game of senile decrepitude." In this connection, he referred to the good results of a holiday.

He urged his hearers not to fall behind in the keeping up to date of their libraries.

He pointed out the necessity for a thorough examination of all cases before reaching a diagnosis. Quickness and surety of decision are also essential requisites of a medical man. The physician's attitude should be "determine what is right and go ahead." Another thing that should be noted is a lack of well directed energy on the part of the physician. He referred to the colored preacher who said: "Brethren, what we want is sanctifigumption."

The true practitioner thinks first of his patients, and then of his home and himself. The practitioner's standpoint is that of a business man, not that of a missionary, but he must always have his profession

at heart, rather than any mercenary ends. He concluded by a quotation from Arnold, urging the practitioner to be energetic in his professional duties.

Significance of Albumen in the Urine.

Dr. J. Amyot read a paper on "The Significance of Albumen in the Urine" He pointed out that albumen in the urine is not necessarily an indication of disease in the kidney. The question of secretion of albumen by the kidney is still an open one. Certain of the albumens in the urine may be the nucleoproteids derived from the shed epithelial cells of the urinary tract. This is known as the physiological albumen of the urine. It has no clinical significance. Certain albumens are found in the urine which are not normally present in the blood. There is what is spoken of as an accidental albuminuria which is due, in many cases, to an abscess about the kidney or along the urinary tract. The excretion from the kidney is from the great quantity of blood passing through it and excreted by it are the various waste products of tissue metabolism and other foreign particles, such as bacteria.

The most important things in the urine are not these substances, but other toxines not yet defined. To these is due the trouble and to these belongs the significance. The albumen passes from the blood in proportion to the amount of damage done to the renal cells by these toxines, and the amount of albumen in the urine is an indication of the extent of the damage to the renal epithelium. The areas of degenerations occur in different parts, in some cases in the Malpighian bodies, in others in the tubules. If the toxine is not crystalloid, the Malpighian body is not affected. If it passes through the Malpighian bodies it is taken up by the cells in the tubules, and they suffer in consequence. The various kinds of albumens are:—Serum albumens, peptones and casts, due to inspissation in the tubes of various substances, including blood. The presence of peptones in the urine denotes the presence of tissue change, provided disease of the intestine can be excluded. This latter should be borne in mind when peptones are found in the urine. If pus cells, or epithelial cells, or casts, not formed in the kidney, are present, the significance does not refer to the kidney. The greater the amount of albumen, the greater the renal destruction and consequent loss of function, and the outcome of the case can be considered according to the quantity of albumen.

X-Rays in Sarcoma.

A paper on X-Rays in Sarcoma was read by Dr. C. R. Dickson, Toronto. Dr. Dickson opened his paper by citing a case of typhoid

fever with a number of boils following convalescence. A tumor was later observed below the second rib which was removed by Dr. Bingham. It recurred and the x-rays were tried at various intervals. The tumor was reduced in size one-third in a month. The tumor became softened and a slight erythema developed. The sarcomatous tissue broke down, and healing has resulted to a great extent. A slight discharge is still present. The raying is performed at intervals. The tumor was quite superficial in character, being unattached to the ribs.

A short discussion took place, in which Drs. Wilson and Milner participated. Dr. Milner cited the use of Coley's fluid and x-rays combined. Dr. Dickson was asked the result of the use of x-rays in the case of sarcoma in the deeper tissues.

In closing the discussion, Dr. Dickson stated that iodide of potash had been given freely, with no effect on the growth. He also stated that Coley's fluid had proven itself to be devoid of generally favorable results. As an adjuvant to the x-rays, he mentioned the ultra-violet light. The danger of auto-infection in these cases increases with the depth of the tumor from the surface. Dr. Dickson stated that in his personal experience x-rays in the deeper tissues were disappointing.

Dr. McPhedran made a few remarks about the tumor. He would not say it was malignant. He expressed the possibility of necrosis in the vicinity of the tumor, and the possibility of its being inflammatory must not be lost sight of. He stated that the general health of the patient seemed to point towards malignancy, however.

Otitis Media.

Dr. G. H. Burnham read a paper on the above subject. He spoke of catarrhal otitis media. In this form there is thickening, with some secretion. The ossicles are affected. Then there is a hyperplastic form. In this form the prognosis is bad, as it is not amenable to treatment, so far as hearing is concerned. In the early stage of otitis media, the nasal passages and throat should be kept clean. The Eustachian tube should be cleansed by means of the Politzer bag, or the catheter.

In acute otitis media, if relief does not come in 12 to 24 hours, the membrana tympani is likely to rupture. This should be avoided by making an incision in it. He spoke highly of the value of the combined treatment of pilocarpine by hypodermic injections, and the internal administration of potassium iodide and mercury. This treatment often aborted acute cases, and was of the utmost value in the chronic hypertrophic form. It brought about tissue change, and promoted absorption.

Dr. Price Brown spoke on the prevention of otitis media. Invasion comes through the Eustachian tube, and consequently it is necessary to

remove the cause, which is usually adenoid tissue. If this is removed in young children, many cases of middle ear diseases will be prevented.

Dr. Hunter prefers an application to the parts rather than the spray. Argyrol or nitrate of silver may be used.

The discussion was closed by Dr. Burnham, who said, that judging by some articles that had appeared, their authors did not understand his combined treatment.

Appendicitis and the Country Doctor.

Dr. J. W. S. McCullough, Alliston, took up the subject of appendicitis from the standpoint of the country doctor.

After describing the forms and relations of the appendix, he recalled the symptoms. These were tenderness over McBurney's point, sudden acute colicky pains, nausea and vomiting, rigidity, usually also some fever, and pulse acceleration. If condition is due to the colon bacillus the fever is slight. Streptococus infection increases the temperature. An enema should first be given; and for relief of pain, chloroform or chloroform water. Surgical treatment should be resorted to at the earliest possible moment. Few cases will become complicated if the practitioner is quick and skilful in his work.

Dr. Webster acquiesced with Dr. McCullough in his opinion that the treatment should be surgical in most cases.

In regard to purgatives in appendicitis, Dr. McCullough gives a dose of castor oil and has never found it do any harm.

Chronic Empyema.

Dr. Primrose read a paper on Chronic Empyema. This condition on the left side has been more fatal than when on the right side. Dr. Primrose cited cases where empyema pointed beneath the skin and still remained as a pure pneumococcic infection.

In the treatment of a case the loss of the drainage tube into the cavity must not be overlooked. When tubercular phthisis is present, operation should not be resorted to, but in chronic cases, otherwise hopeless, extensive resections may be made. Free drainage was instituted in all cases. Much is not to be gained by irrigation. By the use of free drainage the comfort of the patient is greater, and there is less likelihood of the condition becoming chronic.

Dr. Ferguson acquiesced in the opinion of free drainage. Care must be taken to avoid mixed infection. He also believed in not operating upon tubercular cases, except for the relief of urgent symptoms. He dissented from Maguire's opinion of not opening in a case of pyopneumothorox. The operation should be thorough, the diseased tissue

being removed freely. In performing Schede's operation it is necessary to remove enough of the ribs to permit the chest wall to fall in upon the collapsed lung. If this is not done a pus cavity will remain.

The Luncheon.

On Wednesday at 1.30 p.m. the Association's luncheon was held at the King Edward Hotel. The handsome green and gold dining room was filled with the members present. A most enjoyable time was spent. The toasts of "The King" and "Our Guests" were proposed and heartily responded to by Drs. Musser, Cullen and Barkey. The venerable old Dr. Harrison made an eloquent address and was warmly applauded. Rev. Dr. Sparling also addressed the members. After the luncheon the members of the Association were the guests of Mr. Albert Gooderham and the owner of various yachts. A most enjoyable time was spent on the "Cleopatra" and the smaller yachts, and the kindness extended the members of the Association was greatly appreciated.

The Treatment of Pneumonia.

Dr. J. H. Musser, of Philadelphia, gave an address on the above subject—see page 796.

Dr. McCallum, of London, expressed approval of the lines of treatment mentioned. He advised the use of strychnia at once and not to wait till it is specifically indicated. He spoke of the great value of nursing in this disease. He believed a true use of serum therapy was to promote the action of the secretions.

Dr. N. A. Powell spoke in praise of the address, and the pleasure Dr. Musser's presence had given the association. He stated Dr. H. O. Marcy, of Boston, had been a guest of this association and was then elected president of the American Medical Association. In like manner, Dr. J. A. Wyeth, of New York, had been our guest and then president of the American Medical Association. This year we invited Dr. Musser, and shortly afterward he was elected president of the American Medical Association. A number of members took part in the discussion and asked a number of questions.

In reply, Dr. Musser answered the various questions that had been put. He stated in many cases little else is required than the routine treatment by cupping, calomel, salines and strychnia. He believed in the importance of good nursing, which includes isolation and free ventilation. He carefully watched the pericardium and aspirates as soon as symptoms indicate pressure from the presence of fluid. Treatment by incision is necessary in some cases. Ice is used intermittently, not con-

tinuously. He thought the cupping and ice application act as stimulants through the peripheral nerves. The reason he uses them is because his results have been good under such treatment. Blood letting may relieve the symptoms, but he does not see how the toxæmia is reduced by such a course.

In regard to the use of oxygen. he stated that he has never seen more than a mental satisfaction result from its use. He was not opposed to mild purgation from the first, as it might aid in the freer flow of bile, which is quite probably a factor in the elimination of the toxins. He prefers to use strychnia rather than atropine. The action of the latter he classes with adrenalin, as temporary in action.

It was moved by Dr. Powell that Dr. J. H. Musser, of Philadelphia, and Dr. Thomas S. Cullen, of Baltimore, be elected honorary members of the association. This was unanimously carried.

THURSDAY, 17TH JUNE.

Surgical Treatment of Goitre.

The Surgical Treatment of Goitre, by Dr. G. A. Bingham, was the first paper Thursday morning—see page 812.

Dr. Bruce followed with record of four septic cases, upon which he had operated successfully. The treatment in all these cases consisted in excision, disinfection and drainage. Electricity was also used. Dr. Bruce stated that in these cases Dr. Stevenson, who is an expert anæsthetist, preferred ether to chloroform. He concluded by referring to the dangers arising from allowing thyroid secretion to pass into the wound.

Dr. Paul, of Liverpool, has advanced the theory that squeezing the thyroid gland causes the thyroid fluid to pass into the wound, where it is absorbed by the lymphatics, with the resultant symptoms of thyroidism, which, in some cases, proves fatal.

In the discussion which followed Dr. Dickson stated that electricity was only of benefit in a limited number of thyroids, those which were not cystic, malignant or fibroid.

Dr. John Ferguson followed, and stated his belief that the symptoms of Grave's disease were due to thyroid intoxication of the system, in opposition to the view of Sir William Gowers, that it is due to sympathetic nerve centre affection. Some of these cases should be operated upon, leaving enough of the gland to prevent the occurrence of myxœdema. Most cases of cystic degeneration and fibroid enlargement, with troublesome pressure symptoms, and nearly all instances of malignant disease, should go to the surgeon.

Drs. Hunter, F. N. G. Starr, Powell, Bruce Smith, Anderson and McCallum joined in the discussion.

Dr. Bingham, in closing the discussion, referred to the excellent results of Kocher of Berne, in the cases of goitre. He again emphasized the fact that the anæsthetist should be an expert, and that the anæsthetic should be stopped after the skin incision is made, till pressure is removed from the trochea. He expressed regret that his method of obliterating the dead space was not discussed. He advocated the use of the ice-bag to the heart.

Dr. Bruce followed by making mention of certain points in the technique. He emphasized the fact that the thyroid gland should be manipulated as little as possible, thus decreasing to a marked extent the possibility of thyroidism.

Arterio-Sclerosis.

This subject was taken up fully in a series of papers. Dr. H. B. Anderson, of Toronto, discussed the artiology and pathology; Dr. T. W. G. McKay, of Oshawa, the cardiac aspects; Dr. John Caven, of Toronto, the renal aspects; Dr Hugh McCallum, of London, the cerebral aspects; Dr. J. C. Connell, of Kingston, the ophthalmic aspects; and Dr. J. L Davison, of Toronto, the therapeutics. These papers and the discussion upon them, will appear in the August issue of THE CANADA LANCET.

Diphtheria.

Prof. J. J. Mackenzie reviewed the discovery and subsequent history of Klebs-Lœffler Bacillus, and referred to the discovery of the antitoxin. He also referred to the culture of the bacillus, and spoke of the ætiological insignificance of the psendo-bacillus in the causation of the disease. He stated that the time had come when the physicians of the country should depend upon themselves in the culture and examination of the swabs by the use of incubators. He pointed out that failure is sometimes due to the drying of the swab before the culture has been attempted.

He also referred to the presence of the bacillus in the healthy throat, without the presence of any symptoms. This he attributed to the lessened virulence of the bacillus, or the increased antitoxic condition of the throat in such healthy persons. He dwelt upon the use of disinfectants in the throat, and stated that the disinfectant necessary to destroy the bacillus would cause damage to the mucous membrane of the throat. It is essential to bring the throat back to its normal condition, and this is best accomplished by means of bland lotions and washings.

Prof. Mackenzie emphasized the fact of adequate dosage in the use of antitoxin, and he considered 2,000 units the minimum dose; and in

severer cases 8,000 to 10,000, or much more, if so indicated. He stated, in support of this, the excellent results of antitoxin treatment by the Ottawa Isolation Hospital authorities.

He also discussed the prophylactic administration of antitoxin, and expressed the hope that a prophylactic serum would soon be obtained, which would insure perfect immunity.

Drs. Ferguson and McMahon referred to the dosage of the antitoxin, Dr. Ferguson having given as much as 20,000 units. Dr. McMahon hoped the Association would bring to bear some declaration urging the city council, or government, to give better facilities for the antitoxic treatment of diphtheria. He advocated the early use of the antitoxin, even before the bacteriological examination has been made.

Dr. Bryans asked Prof. Mackenzie whether antitoxin should be used in cases where the bacteriological examination shows the presence of the bacillus, while the clinical symptoms do not permit a diagnosis of diphtheria?

Drs. Wilson and Carveth also joined in the discussion, the latter stating that antiseptics did not kill the germ.

In answer to Dr. Bryan's question, Prof. Mackenzie stated that in those milder cases the administration of the antitoxin should be left to the judgment of the physician. He also emphasized the fact that the city should take action in providing antitoxin for the poor.

A resolution was then unanimously passed supporting this view.

The Medical Witness.

The next paper was that of Mr. W. R. Riddell, K.C. on "The Medical Witness in the Witness Box." Mr. Riddell referred in witty terms to the former treatment of diphtheria, as well as its diagnosis and prognosis, and stated that medical men agreed only on the one point, that "if you get a costly medicine the more of it administered the better," even though they disagreed on all other points.

There is said to be three kinds of liars, the liar, the damned liar, the expert witness. There are two kinds of witnesses: 1, the common witness who speaks of facts; 2, the expert who gives opinions.

In this latter it is not surprising that there is differences among expert medical witnesses. Among all classes and professions there is always a difference of opinion in regard to the nature of things.

The object of cross-examination is to elicit the truth, and to determine this in two ways; first, to ascertain whether he is telling the truth or not; and, secondly, to find out how far his knowledge of the subject entitles him to the respect of the court.

The first thing of importance in a witness is his ability to comprehend the question; secondly, his capacity to say what he means in such a way that he can be thoroughly understood and convey no false impressions. He said cross-examination was one of the most valuable methods of eliciting the truth. A medical witness has two duties: 1. He must tell the truth; 2. He must tell it in such a way as that the people will believe him.

A witness box is no place for jesting or frivolity. When a witness has taken the oath, he is under a serious obligation, and it is his duty to prepare himself for all questions which may be asked.

Physical preparation is also essential, as an aid to the mental strain. The personal appearance is an important factor in the eyes of the judge and the jury. All these things assist in the important object of making the truth tell.

Rules for answering questions: 1. Don't answer a question till you understand it thoroughly. It is your privilege to have it repeated. 2. Answer as briefly and concisely as you can, consistently with the truth. If it cannot be answered 'yes' or 'no,' then refuse to answer it that way. 3. When you get through answering a question, 'shut-up.' If a man keeps his mouth open wide enough he is going to put his foot in it. If the answer is going to be misleading, say so, and ask that the question be put in a clear way.

If these rules are applied, much time will be saved and the witness will hold a higher place with both judge and jury. Do not be 'smart' in the witness box. It will count against you.

Don't go and talk outside of the questions, and don't get too gay.

Any medical man, behaving properly in the witness box, need not fear his position, if he only answers the questions in a clear and concise manner and acquits himself like a gentleman.

On motion by Dr. Bingham, a vote of thanks was tendered to Mr. Riddell for his splendid address, and also that he be elected an honorary member of the Association. Dr. Powell seconded the motion in a few witty remarks. It was unanimously carried.

The Medico-Legal Autopsy.

Dr. Silverthorn read a paper on "The Medico-Legal Autopsy." He spoke of a few points in reference to the medicio-legal autopsy. The first thing to be considered is the identification of the body. Its surroundings should be examined for blood stains, foot marks, signs of a struggle, the clothing for blood stains and should be removed before the post mortem is made, the body for injuries and all its orifices. He referred

to two cases of autopsy, those of poisoning, and those of wounding. In regard to wounds, the direction, condition and extent of the wound must be examined carefully and minutely. In cases of poisoning, there must be a careful examination of the person internally and externally. The viscera should be ligatured and carefully removed and placed in labelled clean glass jars, mentioning whether preservative or embalming fluid has been used. He emphasized the importance of a careful examination of all cases, and gave a report of two cases: One a case of bullet wound, which is reported in a recent number of THE CANADA LANCET, the bullet entered the aorta and was found in the left femoral A second case was that of a man dying from a fall through a high building in the course of construction. A piece of wood had been cut by the upper teeth from one of the joists on the man's passage downward and this was found lodged in the trachea, below the vocal cords.

He also outlined a method of determining whether a blood stain is human or that of a domestic animal. This is known as the serum theory, which will be outlined in a further description on a future occasion. It consists essentially in the introduction of the blood of the suspected species into the peritoneal cavity of a rabbit. To the rabbit serum obtained from this rabbit after some days, is added a solution of the suspected stain. If a precipitate is thrown down, the evidence is conclusive as regards that species.

Drs Anderson and Ferguson expressed the hope that the doctor performing the autopsy would be better paid, and that the examinations should be thorough.

Mr. Riddell acquiesced in the views expressed by the previous speakers.

On motion by Dr. Anderson the two following papers were taken as read:

1. Contagious Diseases in the Economic Aspect, by P. H. Bryce Toronto.

2. Impetigo Circinata, by Graham Chambers, Toronto.

Contagious Diseases.

Dr. P. H. Bryce's paper takes strong ground on the need for thorough isolation of those afflicted with infectious diseases. His paper points out the importance of the family, the physician and the municipality co-operating in the suppression of contagious diseases. He pointed out the economic value of the time and lives saved by such means.

Impetigo Circinata

Dr. Graham Chambers, in his paper on this subject spoke of the role played by pus organisms in the various forms of impetigo. The author

of this paper thought there were three forms of the disease: The impetigo contagiosa of Tilbury Fox, the impetigo of Bockhart, and impetigo circinata. The latter is usually a disease of the adult, and is generally contracted in barber shops. The lesions are found on the face, forehead, ears, neck and wrists. They are usually discrete, and vary in size from a pin's head to that of a quarter of a dollar. They are in circular groups. The staplylococcus is the usual germ. The treatment consists in the use of antiseptic lotions.

Business Session.

The meeting then went into business session, and the reports of the various committees were heard and accepted.

The Treasurer's report was presented and unanimously adopted.

The following resolution was passed:

"That in the opinion of this Association it is desirable that a supply of diphtheria anti-toxine be kept at the various isolation hospitals and supplied without charge to indigent patients on prescription of the medical attendant, and that a copy be sent to the Boards of Healths in Ontario."

It was moved by Dr. Uren and seconded by everybody, that the hearty thanks of the Association be tendered to Dr. Parsons, who executed his duties so unselfishly and successfully.

Dr. Parsons replied.

On motion by Dr. McKinnon, seconded by Dr. Ross, a grant of $100 was made to the Ontario Medical Library.

A hearty vote of thanks was tendered to Dr. W. P. Caven, Chairman of Committee on Papers and Business, and to Dr. Riordan and Dr. King on the Committee of Arrangements.

A hearty vote of thanks was extended to Mr. Albert Gooderham and the owners of the various yachts, as well as to the Minister of Education, for the use of the hall.

Mr. Cameron gave notice of motion that at the meeting of 1904, the by-laws of the constitution be amended so that this Association shall become the Ontario branch of the British Medical Association.

The installation of officers then took place, and President Mitchell in a few brief words called upon the new president, Dr. Ross, who spoke in appreciative terms of the honor done him.

On motion by Mr. I. H. Cameron, the retiring president was tendered a hearty vote of thanks and appreciation on the part of the Association.

Toronto was selected as the next place of meeting.

The following officers were elected :—President, Dr. J. F. W. Ross, Toronto; Vice-Presidents, Dr. Burt, Paris; Dr. Turnbull, Goderich; Dr. J. C. Connell, Kingston; Dr. J. H. Elliott, Gravenhurst; Secretary, Dr. C. P. Lush, Toronto; Treasurer, Dr. A. R. Gordon, Toronto.

TORONTO MEDICAL SOCIETY.

The final meeting was held May 21st, 1903, the President, Dr. Hay, in the chair. Dr. W. J. Wilson read a paper, "Notes of a few Cases of Diabetes." Dr. G. Chambers said that he had seen two cases in children, who died in coma. In adults, he had seen one case with sp. gr. 1016, and sugar present. In another, sp. gr. 1028, the urine diluted with five parts water, no reaction with Fehling's test; but undiluted, reaction positive. The treatment, he said, was first to watch the weight. If there was loss, the proteids were wasting. If di-acetic acid was present, do not diet, but if Gerhart's reaction (ferric chlor.) be absent, diet. Dr. A. Fletcher asked if there was any relation between tuberculosis and diabetes? He related a case in a family of marked tubercular tendencies. Dr. Hunter enquired regarding the eye symptoms in diabetes. Relating a case in point, he said that the number of cases in children at the Infants' Home were very few. Dr. Bryans asked Dr. Hunter what the disease of the eye was, and in reply was informed some inflammation. Dr. Webster said that lean patients did badly. Diet made no difference. Dr. Wilson in reply said, one case, sp. gr. 1012, showed sugar. He had noticed the history of tuberculosis in a number of the cases and thought it should be investigated. He had seen inflammation of the eye in one case, the whole uveal tract being involved.

Dr. Graham Chambers read a paper entitled "Some notes on Gastroptosis with special reference to its relations to pregnancy." He said that among the causes of gastroptosis in women, pregnancy, and especially repeated pregnancies, is one of the most active. This causal factor is more marked when the pregnancies occur at short intervals. The process by which pregnancy tends to produce this displacemect of the stomach is probably in some cases complex. Abdominal flaccidity, following parturition, preceded by intra-abdominal tension during pregnancy, must, I think, be looked upon as the most active factor in these cases. But there are, no doubt, other causative agents, such as emaciation, flat chest, congenital weakness of the nervous system, and tight lacing, which act concomitantly with it. Although after parturition there is a tendency to downward displacement of the abdominal organs

it is a common observation that, when a patient suffering from gastroptosis becomes pregnant, the condition of the gastric digestion is improved. The subject under consideration may therefore be conveniently discussed under two headings; (a) Pregnancy as a cause, and (b) Pregnancy in the treatment.

Pregnancy as a cause of Gastroptosis.—According to the reader's experience, downward displacement of the stomach is a cause of a considerable proportion of the cases of indigestion in women who have borne children. The gastroptosis, in these cases, is usually accompanied by downward displacement of other abdominal viscera which, no doubt, increases the digestive disturbances. The subjective symptoms referred to the stomach, in this type, are very variable, and are of very little use in determining the nature of the disease. The functions of the stomach are frequently disturbed. In the majority of cases, the gastric secretion is increased; but normal, or diminished, secretion is not uncommon. The motility of the stomach is probably always lessened.

In this type, as in all cases of gastroptosis, the physical signs are the most important in diagnosis. The abdomen is flaccid, and the right kidney and often the other organs can be made out with great ease. In two cases, he had been able to feel the head of the pancreas very distinctly, and in many others indistinctly.

The most important physical sign is the recognition, by inspection, of the position of the stomach, both curvatures of the stomach being lower than normal and the lesser being frequently visible. The character of the movements can readily be made out by inspection after inflation of the stomach. All that is necessary, in many cases, is to have the patient drink a glass of soda water and then breathe deeply, when the distended stomach may be seen moving up and down in the abdomen. The position can be determined by the splash and auscultatory percussion. Thinness, emaciation, and neurasthenia are nearly always common symptoms of the condition. Under treatment, if the patient increased in weight, even if the indigestion continued, the treatment was successful, as the deposit of fat increased intra-abdominal tension and aided in the further treatment of the disease. The nervous symptoms are very marked and are referred to the brain, spine, kidneys, pelvis, heart, and other organs. Frequently it is for the relief of these that the patient seeks advice. It was on this account, he thought, that mistakes were sometimes made in the treatment of these cases. He had had cases suffering from downward displacement of the abdominal organs, who had been operated on for movable kidney, diseased ovaries, laceration of the cervix, etc., without benefit. In some, he thought the symptoms

were greatly aggravated by the operation. With regard to the relation of the nervous manifestation to the stomach, a vicious cycle may be said to exist, as the downward displacement of the abdominal organs tends to produce indigestion and neurasthenia, and the latter disease augments the digestive disturbance. Of such a sequence I have frequently obtained clinical evidence, as the application of a perfectly fitting abdominal support relieved not only the gastric, but almost immediately the neurasthenic symptoms. This is particularly true of gastroptosis of recent origin.

Pregnancy in the treatment of Gastroptosis.—A pregnant uterus increases the intra-abdominal tension, and one should expect that when a woman, suffering from gastroptosis, becomes pregnant the condition of the patient improves. Such is the case. Patients have frequently stated that during their pregnancies, the condition of their digestion was greatly improved. In one case he had noticed this and by lengthening the period of convalescence in bed after the labor as well as by careful bandaging, attempted to retain the advantages in the health, gained during gestation, with excellent result.

The following officers were elected for the next year:—President Dr. Silverthorn; 1st Vice President, Dr. J. Hunter; 2nd Vice Pres, Dr. Bryans; Cor. Sec., Dr. Beatty; Rec. Sec., Dr. Ashton Fletcher; Treas. Dr. Carveth; Auditor, Dr. Machell; Executive Committee, Drs. Hay, Macdonald and McIlwraith.

THE PROVINCIAL BOARD OF HEALTH.

At the recent meeting of the Provincial Board of Health there were present Drs. Vaux, (Chairman), Cassidy, Kitchen, Oldright and Bryce.

Attention was directed to the severe outbreak of scarlet fever at Toronto Junction. There had been 13 deaths, and one case had retained the infection for a period of eleven months. Many of the cases had been satisfactorily treated in a tent.

In Teeswater there had been 100 cases since January. The local Board of Health had failed to placard the cases.

There had been an interesting dispute between Ottawa and Hintonburg. The patient lived in Ottawa and his parents in Hintonburg, where he was sent for this reason. His case was recognized as smallpox in the latter place, when he was sent back to Ottawa. The board held that Ottawa should have footed the bill, and that the doctor who ordered the patient's removal to Hintonburg had rendered himself liable to a fine of $40.

A very severe epidemic of scarlet fever had occurred at Minden. There had been 13 deaths during March, April and May. The local authorities had asked for literature dealing with contagious diseases.

A report was received from Lindsay to the effect that it was unable to build a hospital for contagious diseases this year.

Attention was called to the fact that in some places doctors were in the habit of allowing their patients to go out too soon after scarlet fever, and that the disease was spread in this way. It might be necessary to take drastic means in some of these cases.

The Board of Health condemned Mr. Kribb's bill to abolish the law making vaccination compulsory.

With regard to Dr. Pyne's bill providing for the inspection of fish and vegetables, the opinion was expressed that it could not be carried out, and that the bill would not pass the Legislature.

The outbreak of smallpox in East Toronto had been completely checked. The last three cases were free from infection.

Dr. Bryce's annual report was adopted. The report stated that the epidemic of smallpox, which broke out in Galt last autumn, originating in a case coming from Cleveland, was accountable for 142 cases and 11 deaths, of which 86 cases and 6 deaths were in Galt. For 21 years isolation and vaccination had been the chief weapons used in combating smallpox. From 1882 to 1900 there were 135 outbreaks, 1,085 cases, and 170 deaths. In 1901 there were 199 outbreaks, 2,500 cases, and 12 deaths. In 1902 there were 1,800 cases.

No case had yet been heard of which was officially recognized as having been taken from Ontario into a neighboring State, all going to show the efficacy of vaccination.

Scarlatina has prevailed seriously during the year, but the latest reports showed a decided decline. During the four months of 1903 there had been 350 deaths. Dr. Bryce said that the importance of the measure making the local health officer responsible for determining the nature of quarantine necessary had been well established, and its wisdom proved during the recent outbreak.

The available figures and facts, apart from experience in handling smallpox, scarlet fever, and diphtheria, in this Province, seemed to settle effectually any question of the necessity for dealing with a serious epidemic disease in a thorough manner. It is apparent that medical health officers must be empowered, as in smallpox, to provide means for separating cases of scarlet fever and diphtheria from their families.

CANADIAN MEDICAL ASSOCIATION.

As already announced through the columns of this journal, the thirty-sixth annual meeting of the Canadian Medical Association will take place at London, Ontario, on the 25th, 26th, 27th and 28th of August, with Dr. Walter B. Moorhouse of that city as President. Dr. George A. Hodge, Queen's Avenue, is Chairman of the Programme Committee, and Dr. Hadley Williams, Park Avenue,is Local Secretary, to either of whom, or to the General Secretary, Dr. George Elliott, 129 John St., Toronto, titles of papers may be sent. Arrangements for reduced fares on the regular Standard Certificate plan have been already completed with the Grand Trunk and Canadian Pacific Railways, while negotiations are now in progress with the Intercolonial and the Canadian Pacific officials as to transportation rates from the Maritime Provinces and points west of Fort William. These arrangements will be published in full in due time. In addition to those who have consented to read the regular addresses, the following have signified so far their intention of being present and contributing papers: A. M. Rosebrugh, Toronto; Perry G. Goldsmith, Belleville; T. Shaw Webster, Toronto; R. Ferguson, London; A. Lapthorn Smith, Montreal; Henry Howitt, Guelph; Alexander McPhedran, Toronto; E. G. Wood, Nashville, Tenn.; C. W. Wilson, Montreal; George H. Aylesworth, Collingwood; Jennie G. Drennan, St. Thomas. This list is every day being added to; and the Programme Committee is desirous that those contemplating should send in their titles without further delay. Entertainment is in the hands of a strong Committee, and London is quite sure to do itself proud in this direction. It is understood that Western Ontario is going to turn out very strong to the support of London, and there is every probability that the largest attendance ever recorded will be equalled if not eclipsed. A great many members in the Western Peninsula who have not attended the annual meetings for years will take advantage of the proximity of this meeting to renew old acquaintances. The meetings will take place in the Normal School buildings, which are said to be the finest of their kind in Ontario.

CORRECTIONS IN DR. WEBSTER'S PAPER.

In Dr. Webster's paper in the June issue of THE CANADA LANCET there occurred the following errors: On page 712 "Calpocoeliotomy" should be colpocoeliotomy. On page 713 read colpocoeliotomy and not "colpocoeilotomy"; for "rectify" read verify; "bathe" should be both. On page 715, "on the hand" should read or, and omit "nor" after "ticket-of-leave". On page 716 read daily for eight months for "eight minutes daily," and "dose" should be do so.

UNIVERSITIES AND COLLEGES.

TRINITY UNIVERSITY MEDICAL EXAMINATIONS.

The results of the final examinations at Trinity University for the degrees of M.D.,C.M. The winner of the gold medal is Mr. Brefney O'Reilly, son of Dr. Charles O'Reilly of the General Hospital. The silver medal goes to Mr. E. C. Beer. The other results follow :—

Certificates of Honor.—H. E. Eagleston, B. F. Cowler, W. T. Gemmell, M. J. Perkins, A. A. Thompson.

Class I.—G. E. Chapman and C. H. Hair equal, G. P. Campbell, A. W. Canfield, B. H. Hamilton, J. M. Baldwin, T. J. C. Tindle, R. A. M. Cook and C. C. Cragg equal.

Class II.—J. H. Kidd, J. P. Cade, R. S. Conboy, R. E. Loucks, E. V. Smith, W. C. Arnold, F. R. Fursey, A. H. Campbell, W. W. Milburn, W. E. Mason, C. E. Duggan, D, Munro, A. C. C. Johnston, L. S. Pritchard, R. A. Fraser, C. B. Stone, J. A. Anderson, W. A. Lawrence, H. W. Coulter, G. F. R. Richardson, E. C. Dixon, F. W. Hill, B. D. Munro, A. H. Cook, F. J. Dodd.

Class III.—Miss E. F. Lucas, C. R. Learn, J. W. Rowntree, H. F. W. Vernon, P. W. Tuller, E. T. Curran, A. W. Hicks, Miss O. M. Rea, W. E. Ekins, Miss M. G. Bryson, Miss L. M. Patterson.

Conditioned.—In pathology and therapeutics, J. A. Allen ; in therapeutics, F. M. Crosby, G. O. Ireland ; in midwifery, gynæcology and pathology, W. E. McLean ; in applied anatomy, A. E. Whitmore.

The results of the primary examination for the M.D.C.M. degree are as follows :—

First Silver Medal.—R. R. B. Fitzgerald. Second Silver Medal.—T. C. Brereton.

Certificates of Honor.—G. H. Carlisle, R. R. Smale, M. J. C. Naftel.

TRINITY UNIVERSITY FEDERATION.

The joint committee which is conducting the negotiations between Trinity and Toronto Universities with a view to federating the two institutions, has been holding more frequent meetings of late, and definite progress is being made.

As Trinity Medical College had become the medical department of Trinity University, the scope of the committee's negotiations had to be widened so as to include the medical college in the scheme of amalgamation.

CLOSING EXERCISES, TRINITY MEDICAL COLLEGE.

The annual commencement at the close of the 32nd session of Trinity Medical College was held 27th May, and was very largely attended. The medals, honors and certificates were distributed, and the final or "fellowship" degrees conferred by Dean Geikie, who was very happy in his remarks to the various recipients.

The valedictory address by Dr. H. E. Eagleston, gold medallist, was clever and witty. He urged the faculty to insist on third-year students being required to pass an examination in clinics, a more equitable division of work between the third and fourth year, and giving more time for the final examinations, which as at present conducted are crowded into three days, thus putting a most severe and unnecessary mental strain on the students.

Dean Geikie in the closing address said the suggestions of the valedictorian would be favorably considered, and that the standing of the college was one of which all might well be proud.

The choir led in singing "God Save the King," and the session of 1902-3 became a memory of the past.

UNION OF TRINITY UNIVERSITY AND TRINITY MEDICAL COLLEGE.

The complete union of Trinity Medical College and Trinity University was announced at the convocation held 28th May in Trinity University Convocation Hall on the occasion of the matriculation of and the conferring of degrees on medical students.

Owing to the absence in Britain of Chancellor Robinson, Provost Macklem, Vice-Chancellor, presided, and almost all the members of the faculty were present. A very large number of visitors were present.

In a short address after the conferring of degrees, Provost Macklem expressed the earnest hope that Canada would make an effort to retain the best and brightest of her sons, so that they may not have to go to other lands to secure the due reward for their great abilities. He was glad to know that the Union of Trinity Medical College and Trinity University was now complete.

Short addresses were given by Prof. Clark, Dr. Bingham, Dr. Grasett and Dr. Sheard, each of whom expressed great pleasure at the announcement made by Provost Macklem relative to the merging of the Medical School in the University.

TRINITY MEDICAL COLLEGE GRADUATES DINE.

The class of '03 had their final gathering at the Arlington Hotel, 29th May. Covers were laid for sixty-five, and at 8.30 o'clock the dinner commenced, with Dr. M. J. Perkins presiding. The following members of the faculty were present:—Dean Geikie, Dr. Teskey, Dr. Temple, Dr. Sheard and Dr. Bingham. After the toasts to the King, country and college had been replied to, Dr. Teskey and Dr. Bingham delivered special addresses to the graduates.

PROVINCIAL AID TO THE UNIVERSITY OF TORONTO.

The Government of Ontario has decided to give the University substantial aid in two ways:—First, by declaring that there shall be only one Provincial University; and, second, by money and land grants. It has been made quite clear that the Government will give $50,000 towards the Convocation Hall Fund. Land is to be granted in aid of the Women's Residence. It was intimated at the Alumni Banquet by Mr. Harcourt that when the friends of Men's Residence had done all they could that some way would be found for completing the work. The Chancellor, Sir W. R. Meredith, has pointed out that the University is doing the same amount of work on an income of $160,000 a year, as some other universities are on incomes three times as great.

THE UNIVERSITY OF TORONTO CONVOCATION.

The commencement exercises of the University of Toronto were exceptionally successful. Eloquent speeches were made by Chancellor Meredith, President Loudon and Prof. Goldwin Smith, and the attendance was very large. The chief topic of the speeches was the improved financial position of the university.

UNIVERSITY OF TORONTO MEDICAL EXAMINATIONS.

Doctor of Medicine.—T. McCrae.

The following have completed the examination for the degree of Bachelor of Medicine.—P. Anderson, J. L. Biggar, A. T. Bond, R. S. Brewster, J. V. Brown, N. D. Buchanan, T. A. Carson, K. Colbeck, C. L. Constantinides, E. K. Cullen, J. E. N. DeHaitre, T. B. Edmison, J. Ferguson. R. O. Fisher, J. G. FitzGerald, E. J. Foster, R. F. Foster, E V, Frederick. C, W. Freeman, W. E. Gallie, W. A. Graham, E. A. Gray, G. E. Greenway. W. A. Groves, J. H. Hamilton, E. L. Hodgins, K. H. Holmes, Miss M. J. Hoyles, J. G. W. Hunt, W. B. S. Hunt, R. Ingram, H. C. Jamieson, D. S. Johnstone, D. P. Kappele, W. J. Kerfoot, C. E. Knister, G. F. Lamb, M H. Langs, F. Large, J. D. Leeson, W. R. Mahood, W. N. Meldrum, T. H. McColl, P. F. McCue, A. McInnis, W. T. M. MacKinnon, R. P. McLaughlin, H. McLean. H. C McLean, N. K. Macleod, W. McTavish, F. C. Neal, J. A. Oille, J. M. Park, J. R. Parry, J. Phillips, A. D. Proctor, P. F. Quinlan, J. M. Robb, F. A. Ross, G. W. Ross, V. Ross, A. A. J. Simpson, D. A. Sinclair, S. Singer, W. E. Somers, N. H. Sutton, D. J. Sweeney, H. M. Torrington, W. S. Turnbull, E. M. Walker, T. W. Walker, B. Weir, T. D. White, G. E. Wilson, G. A. Winters, W. A. W. Woolner, S. C. Yin.

The following must pass supplemental examinations before completing the examination of the fourth year:—Medicine—W. D. Beaton,

J. A. Kane, W. W. Medley, C. M. Mackay, A. L. Russell, N. F. Sutton, D. M. Sutherland. Clinical medicine—D. J. Cochrane, W. W. Medley, G. S. Wray. Surgery—D. J. Cochrane, C. H. Gilmour, A. L. Russell. Surgical anatomy—O. T. Dinnick, D. Evans, C. M. Mackay, A. L. Russell, N. F. Sutton, R. Hacking. Pathology—J. W. Cook, R. B. Harris, L. R. N. Hess, C. F. A. Locke, A. L. Russell. Gynæcology—W. W. Medley, N. F. Sutton, D. M. Sutherland, A. L. W. Webb. Obstetrics—W. D. Beaton, W. S. Fawns, D. M. Sutherland. Therapeutics—A. L. W. Webb. Medical psychology—W. D. Beaton, J. A. Kane.

Medals.—Faculty gold medal, J. A. Oille; first faculty silver medal, J. Phillips; second faculty silver medal, S. C. Yin. third faculty silver medal, G. E. Wilson; Starr gold medal, T. McCrae.

Scholarships.—First year—1. J. H. Holbrook; 2. R. J. McMillan. Second year—1. R. H. Bonycastle; 2. W. S. Lemon.

Post Graduate Scholarship.—The George Brown memorial scholarship in medical science. For this scholarship G. E. Wilson, J. A. Oille, J. Phillips, F. C. Neale, G. A. Winters and W. E. Gallie ranked in the order named.

The Reeve Scholarship in Medical Science. In this scholarship G. E. Wilson, J. A. Oille, S. C. Yin, J. Phillips, M. H. Lang and F, C. Neal (equal) in the order named.

Prizes.—The Daniel Clark prizes in medical psychology.—1. G. E. Wilson; 2: W. B. S. Hunt.

CONVOCATION HALL FUND, UNIVERSITY OF TORONTO.

The fund for the erection of a convocation hall in connection with Toronto University now slightly exceeds the $50,000 which it was the original intention to raise. The committee in charge, however, are anxious to receive additional subscriptions in order to insure the erection of a first-class building, and the lists will not be closed in the meantime.

The alumni of the university undertook to raise the amount, and Dr. J. C. McLennan, B.A., President of the Alumni Association, took a very active personal interest in the securing of the subscriptions. Dr. McLennan visited all parts of the Province and called upon friends of the university to secure contributions, and it is to a great measure through his personal efforts that the fund has been so largely subscribed to. Mr. D. D. Mann, of the firm of Mackenzie, Mann Company made the handsome donation of $5,000. This is one of the large subscriptions, the others being those of Mr. Massey, Mr. Goldwin Smith, Mr. Clergue, and Mr. Ames.

Additional contributions that bring the fund over the $50,000 mark are Mr. and Mrs. Goldwin Smith, $5,000; Messrs. Barber & Ellis, $500;

Alexander Nairn, $200, and T. D. Delamere, $25. Mr. and Mrs. Goldwin Smith had formerly contributed $2,000, so that their entire subscription amounts to $7,000.

UNIVERSITY OF TORONTO ALUMNI OFFICERS.

The election of officers resulted as follows:—Hon. President, James Loudon, M.D., LL.D.; President of the University; President, R. A. Reeve, B.A., M.D., LL.D.; Vice-President, I. H. Cameron, M.B., F.R.C.S., M.A.; A H. McDougal, B.A., Ottawa; Hume Cronyn, B.A., London; E. B. Edwards, M.A., Peterboro'; A. Bartlett, B.A., Windsor; Col. W. N. Ponton, M.A., Belleville; W. H. Ballard, B.A., Hamilton; Secretary and Treasurer, J. C. McLennan, Ph.D.; Executive Committee, A. R. Bain, M.A., LL.D., E. F. Blake, B.A., J. S. Carstairs, B.A., Miss Chown, B.A., Harold Clark, D.D.S., J. M. Clark, B.A., LL.B., H. J. Crawford, B.A., Miss E. M. Curzon, B.A., J. T. Fotheringham, M.B., C. C. James, M.A., M. H. Ludwig, LL.B., W. H. Moore, B.A., Bruce McDonald, B.A., A McPhedran, M.B., A. C. Macdonald, M.B., Rev. John Neil, B.A., Rev. T. R. O'Meara, W. Packenham, B.A., J. B. Reynolds, M.A., T. R. Rosebrugh, B.A., Andrew Smith, V.S., F.R.C.V.S., S. C. Smoke, B.A., J. H. Squair, B.A., J. R. L. Starr, B.A., Rev. Father Teefy, LL.D., F. H. Torrington, Mus. Doc., R. S. Waldie, B.A., W. T. White, M.A., J. McGregor Young, B.A., R. J. Young.

UNIVERSITY OF TORONTO WOMAN'S RESIDENCE.

Representatives of the Woman's Residence Association of Toronto University, headed by Dr. Hoskin, Miss Hamilton, Miss Cole, Miss Patterson, and others, asked Premier Ross for a grant of $50,000, to assist them in erecting a woman's residence. They have already raised by subscriptions $6,500.

WOMEN DOCTORS' ANNUAL BANQUET.

The aunual banquet of the Alumnæ Association of the Ontario Medical College for Women, was held in the College, 291 Sumach street, on 28th May. This is a function now well established, and has as its object the welcoming of all recent graduates into the profession. This year there were five women graduates. Most of these were present, along with the majority of women practitioners in Toronto. The interest of the gathering was greatly augmented by the presence of Dr. Eliza R. Gray, of Owen Sound, and Dr. Jennie Hill, Mitchell, who recently returned from China. Favorable reports and messages of a congratulatory nature were received from members of the society practising in several of the States of the Union, and in foreign fields.

McGILL UNIVERSITY MEDICAL GRADUATES.

The following gentlemen, 100 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from the University.

R. Allan; A. W. Allum; C. W. Anderson, B.A.; J. J. Andrews; *G. A. Bishop; *L. C. Bishop; A. K. Blair; *J. H. Boulter, B.A.; *O. Boyd; R. M. Boyd; J. E. Brooks, B.A.; A. S. Burns, B.A.; *W. G. Campbell; *H. B. Chamberlain; E. C. Chandler; H. L. S. Chaplin; H. C. Church; H. H. Cowperthwaite; *L. V. Croft, B.A.; W. G. Cumming, B.A.; *A. J. Dickson, B.A., W. H. Donnelly; F. C. Douglas; F. H. Doyle; P. L. B. Ebbett; R. Elder, B.A.; R. H. Ells, B.A.; J. M. English; W. H. Ferguson; *R. D. Forbes; C. E. F. Fortin, B.A.; E. H Freeze; A. C. Frost: W. P. Gale; *C. R. Gilmour; N. C. Hansen, M A.; R. H. M. Hardisty, B.A.; F. L. Horsfall, B.A.; W. T. Hynes; R. W. Kenny; R. King, B.A.; J W. Kissane; W. V. Lamb; Ernest Laurie, B.A.; J. A. Lundie, B.A.; W. S. Lyman, Ph.B.; *A. L. Lynch; R. St. J. Macdonald, B.A.; W. A. Mackenzie; J. W. MacKinnon; *J. M. McCulloch; C. A. McDiarmid; P. A. McDonald, B.A.; S. H. McDonald, B.A.; *J. W. T. McEachern; J. R. McEwen, B.A.; F. C. McGrath; J. D. McGuigan; *D. W. McKechnie; H. H. McIntosh; *J. A. McIntosh; *D. D. McLaren; E. M. McLaughlin; *Thos. McPherson, B.A; W. J. Maby; *C. F. Magee; *A. G. Meindl; I. E. Mitchell, B.A.; C. H. Montgomery; S. C. Morris; *H. B. Munroe, B.A.; *H. E. Munroe; *J. H. Munro; J. S. Murray; J. S. Nelson; W. E. Nelson; C. W. O'Brien, B.A.; J. M. O'Neill; N. D. Parris; F. S. Patch, B.A.; H. L. Pavey; *G. R. Peterson; B. A. Puddington; W. N. Rehfuss, B.A.; W. E. Saunders; W. Scott; *W. H. Secord; D. Le B. Shaw; M. R. Slack; E. O. Steeves; F. E. Stowell; N. W. Strong, B.A.; E. A. Taggart; S. B. Thomas: R. H. Townsley; W. Truax; G. H. Turner, B.A.; J. G. Warren: S. G. White; A. Wilson.

Holmes gold medal, for highest aggregate in all subjects forming the Medical Curriculum, E. M. McLaughlin, Winona, Minn. Final prize for highest aggregate in the Fourth Year subjects, F. S. Patch, B.A., Montreal, Que.

Third year prizemen: J. L. Robinson, of St. Marys, Ont. Sutherland medallist, J. Graham Willmore, of Montreal, Que. McGill medical society senior prizes: D. W. McKechnie, first prize. W. G. Campbell, second prize.

Second year prizemen: H. C. Mersereau, Doaktown, N.B. Senior anatomy prize, H. C. Mersereau, Doaktown, N.B. McGill medical society junior prizes: D. L. S. Likely, B.A., first prize. L. DeC McIntosh, second prize.

*From Ontario.

First year prizemen: C. S. Williams, of Tyne Valley, P.E.I. Junior anatomy prize, P. A. McDonald, Alma, N.B.

LAVAL UNIVERSITY GRADUATING LIST.

The following have received their diplomas in medicine from Laval University:—André Brisset, J. C Bourgoin, D. Bergeron, J. R. Belisle, George Etienne Bedard, Albert Cleroux, D. Chagnon, L. P. Dorval, W. G. Drouin, Edward David, W. N. Godin, J. C. B. Godbout, Joseph Guertin, Horace Gervais, Josaphat Isabelle, Hormidas Larose, J. Lapointe, Albert Larose, A. P. Lachance, J. P. Laporte, Arsene Labarre, Eugene Letreille, L. P. Marleau, Jos. Melançon, J. H. Meunier, A. Mailler, J. L. Mauffet, W. Ouimet, Lachance Perron, Henri Prevost, Edouard Pelletier, Philippe Quesnel, J. A. Rousseau, J. A. M. Riopel, P. E. Riopel, J. A. C. Riopel, J. E. Racicot, J. A. Robinson, Edgar Smith, J. A. Sabourin, E. Touchette, W. Tetrault, Alexandre Thibaudeau and Hector Viau.

MANITOBA UNIVERSITY.

Convocation was held June 5th, when the Degrees were conferred and the following results given out.

M.D.

Robert Brodie Anderson, William John Andrew, B.A., Wilfred A. Bigelow, Herman McLean Cameron, B.A., Lewis James Carter,B.A., James Forbes Creighton, B.A., Robert Donald Fletcher, M.A., Thomas Glendenning Hamilton, Howard Harvey, B. A., Stephen Frederick Hepworth, Warren Hastings Lang, Josiah McKee, Richard McRae Oatway, John Angus Perrin, Andrew James Slater, Maxwell Wallace, Joseph Wark, B.A., Alexander Robert Winram, B.A.

C.M.

Lewis James Carter, B.A., James Forbes Creighton, B.A., Robert Donald Fletcher, M.A., Alexander Robert Winram, B.A.

Medals.

University Silver Medal—Robert D. Fletcher, M.A.; University Bronze Medal—James Forbes Creighton, B.A.; O'Donnell Medal in Sanitary Science—Robert D. Fletcher, M.A.

Scholarships.

Third Year: Nelson George Cooper, $65.00; Sidney S. J. Pierce, B.A., $65.00. Second Year: Harry Wigmore McGill, $80.00; Herbert Samuel Sharpe, 50.00. First Year: Roslyn Brough Mitchell, B.A. $80.00; William Alexander Cluff, $50.00.

The following Doctors obtained *Licenses*: W. J. Beatty, Mary E. Crawford, H. J. Hassard, A. J. Hunter, J. C. Little, J. G. Munroe, E. Pennet, J. A. Wellwood.

THE CANADA LANCET

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EDITORIAL.

THE CAUSATION OF INSANITY.

There are few problems in medicine that have more thought about, and been the subject of more discussions, than insanity in its varied forms and their etiology. While much that has been said has been of no value in itself, it has led to the formation of more correct views by keeping the professional mind open for further information, and stimulating it to further research. The whole question of etiology in insanity is as yet a much discussed one, and one in which there are many differences of opinion. There are many factors entering into the causation of insanity in its different forms. One fact stands out prominently however, that, no matter what these causes are, the results of treatment have been far from encouraging. It is safe to say that not more than one-third of all cases of insanity recover, and of these three-fourths have relapses.

The importance of heredity cannot be overestimated.

> "'Tis law as steadfast as the throne of Zeus,
> Our days are heritors of days gone by."

So sang Aeschylus in his Agamemnon. The tendency of many diseases runs in a family for generations. This is true of pulmonary, skin, joint, digestive, arterial and nervous diseases. For some reason there is an inherent weakness in some organ or system, and under the stress and strain of life disease sets in. In other words, it fails before its fellow organs. A person has a certain amount of business worry, and he becomes sleepless, and finally insane. Following a confinement there is some septic trouble, and the unstable nervous system gives way; not so when there is no such vulnerability. An inherited predisposition to insanity can be found in a very large percentage of all cases. The average of this influence cannot be put at less than 60 per cent., and by some is placed as high as 90 per. cent But in addition to heredity there are many exciting, or determining causes. Of these we shall note some of the more important.

The first, as it is the most important cause of insanity, after heredity, is the abuse of alcohol. The abuse of alcohol causes degeneration in

many organs of the body, but very specially of the nervous system. It is a conservative estimate to put the insanity, due to this cause, at 30 per cent. of the total number admitted into the asylums of the United States, Great Britain and Germany. When it is borne in mind that this is a preventable cause, it would seem that special efforts ought to be put forth to enlighten the public on the evils of intemperance on the one hand and to control the consumption of alcoholic beverages within safe bounds. But the insanity caused by the abuse of alcohol does not represent the whole of the evil arising from this cause. The children of alcoholics are often degenerates, though they may not become insane.

Among the important causes of insanity, syphilis takes a prominent place. About 5 per cent. of the insane suffer with that form of mental derangement known as general paralysis of the insane,or paretic dementia. This form of insanity is in almost every case due to a previous attack of syphilis. Add to the above, cases of insanity due to syphilis, other than paretic dementia, and it is safe to say at least 8 or 10 per cent. of all cases of insanity can be attributed to syphilis.

With regard to injuries it may be said that they are not frequent causes of insanity. When injuries do cause mental derangement there is usually a history of alcoholism or a neurotic habit. Not more than 1 or 2 per cent. of all the insane owe their disease to injuries.

It would appear that there is a definite relationship between insanity and tuberculosis. A large percentage of the insane die of tuberculosis. This amounts to at 12 or 15 per cent. It may be that life in asylums tends to produce tuberculosis; but there is good ground for believing that those with a tendency to consumption first lose their reason, and, after being confined in asylums, become tubercular. The debility, anæmia, cochexia, etc., which are usually present in those with a tendency to consumption, are also important factors in the etiology of insanity. The children of the tubercular often go insane, and the children of the insane often die of tuberculosis.

Some forms of insanity are peculiarly degenerative in their nature. Some of these forms appear during the growth of the body. For some reason, inherent in the nervous system, there is an arrest in the development of the brain, and mental evolution is faulty. Such forms of insanity are met with at puberty, and during adolescense, paranoia is a type of these. Then there is the degenerative insanities of age, the sinile insanities and dementias. The vessels become hardened and the convolutions atrophy. With the progressive changes the reason gradually fails.

Sufficient attention has not been given to the study of the condition of the kidneys in insanity. So far as researches in this interesting field have

gone, they go a long way to show that there is some form of renal disease, or derangement, in a very large percentage of the insane. The incidence ranges all the way from 30 to 60 per cent., according to different writers.

Among the causes of insanity overwork, overstudy, worry, loss of sleep, disappointment, etc., must be ranked as of considerable frequency. These causes, however, must first cause physical changes. The nerve cells are exhausted beyond their power to recover themselves, and permanent damage is the result in many cases. The changes in disposition and in the moral characteristics of these cases are in all cases preceded by physical changes.

Poisoning of the system is one of the potent causes of mental derangement. This poisoning may arise out of attacks of such diseases as malaria, influenza, typhoid fever, or acute rheumatism. The poisons may be introduced into the system in the form of drugs of various kinds, or they may arise within the system, the so-called anto-intoxication. Ptomaines and putrefactive products are produced in the digestive canal by bacteria, under certain conditions. Toxæmia in some form is now regarded as a real cause of many cases of insanity. It is here that the main hope for recovery is to be found. Acute cases of insanity, due to toxæmia, yield most of the recoveries.

THE HOSPITALS OF ONTARIO.

The report on hospitals for the year 1902 gives a list of 55 of these institutions. The number of patients in the various hospitals on 1st October, 1901, were 2,287. The number admitted during the year covered by the report was 29,833, making a total of 33,113. There were 1,705 deaths in these hospitals, and the total number of day's stay in them were 817,822. The total revenue of these hospitals was $673,909.21, of which the Provincial Government grant was $110,000. The average cost of patients per day was 84 cents. In the report of 1901, the Government grant was 19 per cent. of the total cost of maintenance, while in the report for 1902, it is only 16 per cent. The income for all the hospitals last year was $58,591.53 in excess of that for the year 1901. This came either from the payments of patients or the donations of friends, as the Government grant remains the same, $110,000.

The Government grant this year is about 17 cents per diem, per patient. Some years ago it was 30 cents per day. During the past years, the numbers of patients admitted to hospitals have been steadily increasing, while the Government grant has remained stationary at $110,000.

The most that any municipality pays for the maintenance of an indigent patient is 40 cents per diem. This, with the Government grant of 17 cents, makes 57 cents as the amount received by hospitals for the maintenance of these patients. The report shows, however, that it requires 84 cents per diem for the care of these patients.

The demand of the hospitals that both the government and the municipalities should increase their grants is a reasonable one. The indigent poor are wards of the state, and should be allowed enough to maintain them in times of sickness, or when laid up with an accident. The Province of Ontario has no greater asset than the hospitals. They are doing an enormous work for the saving of life to the Province. The people get the benefit of this, and should be more generous in the support of these institutions. Too much is left for the willing worker and the generous minded. In this matter the various municipalities should allow 50 cents per diem, and the government 30 cents per diem for the maintenance of pauper patients. This would about defray the cost to the hospitals for the care of this class. The public owes this much to the hospitals as a duty. It is no favor to the hospitals to receive these grants, as they bring with them a class of patients that cause a loss to these institutions of about 30 cents per diem. No time should be lost in remedying this state of affairs.

LONDON'S WOMEN PHYSICIANS.

At the present moment, London has about ninety lady doctors. They are taking a very active interest in the bazaar which Princess Christian and Princess Louise Augusta are organizing in behalf of the Royal Free Hospital, where these lady doctors obtain their training. Recently, a number of important appointments have been made out of the ranks of these lady doctors. The new hospital for women is to be entirely officered by lady doctors. They also fill positions in other hospitals, in the poor law infirmaries, in the post office to look after the health of the girls employed, in mission fields, as medical officers in friendly societies, as government examiners for proposers for annuities and in various important capacities in South Africa and in India.

DR. RODDICK ON DOMINION REGISTRATION.

In his address to the graduating class of one hundred at McGill Medical College a short time ago, referring to the subject of Dominion Registration, Dr. Roddick said :—

Regarding the measure for medical registration, with a majority of the provinces now in line, it would not be unreasonable to ask the

Dominion Government to grant permission to bring in an amendment to the original Act allowing those provinces which wish Dominion registration to begin the work. There was reason to believe that this permission would be granted.

This is the position which THE CANADA LANCET has urged on several occasions.

THE HOME FOR INCURABLES, TORONTO.

It is a matter of much gratification to the friends of the above institution to learn that the management has been able to make such a complete answer to the attacks that have been made upon it. As a matter of fact, we took the trouble to look into this matter and came to the conclusion that a very deserving charity was being seriously maligned. The institution has been vindicated by a full statement signed by the following: Rev. H. M. Parsons, D.D., president; Rev. Chas. L. Ingles, M.A., acting vice-president; Mrs. Wm. Mortimer Clark, first directress; Bruce L. Riordan, M.D., secretary medical staff.

These names are ample guarantee for the accuracy of the report, which must be accepted by every fair-minded person as finally settling this matter.

FUNDS FOR THE COUNTESS OF MINTO'S HOSPITALS.

While attending a meeting in Toronto of the National Council of Women, the Countess of Minto briefly reviewed the good work done by her cottage hospitals, the idea of establishing which she had been imbued with three years ago. Several of these institutions had organized themselves into training schools for nurses, and that of Revelstoke proposed to teach Indian women. She was gratified at the increasing demand for these hospitals, and at the responses that had been made to her appeal for money for the endowment fund. Towards this fund $56,000 had already been contributed by Toronto, $36,000 by Montreal, and $7,000 by Ottawa people, but there still was required about $30,000 to make up the full amount. She concluded by appealing to the audience for help in collecting money for the cause.

THIS ISSUE OF THE CANADA LANCET.

Owing to the meeting of the Ontario Medical Association having been held rather late in June, and the desire to have a full report of the meeting in this issue, the July number has been delayed a few days.

It was felt that the delay would be more than compensated for by the fact there would be so full a report of the proceedings, and a number of the leading addresses and papers. This issue contains 96 pages in addition to a beautiful frontispiece. The August number will contain the papers and discussion on arterio-sclerosis; Mr. W. R. Riddell's address on the medical witness; a paper by Dr. A. H. Ferguson, of Chicago; one by Dr. A. Haig, F.R.C.P., of London, Eng.; and other matter of much interest.

OBITUARY.

Dr. Erastus Gillen died at Belleville recently.

Dr. E. H. Hurlbert died at Brockville 28th May.

Dr. L. R. Morse, of Lawrencetown, Annapolis, died on May 13.

Dr. J. A. E. Ouimet, registrar of the County of Laval, died 9th June.

Dr. Charles S. Haultain, surgeon Northwest Mounted Police, died in Battleford in the latter part of May.

BOOK REVIEWS.

Saunders' Medical Hand-Atlases

ATLAS AND EPITOME OF HUMAN HISTOLOGY INCLUDING MICROSCOPIC ANATOMY.

By Privatdocent Dr. J. Sobotta, of Wurzburg. Edited, with additions, by G. Carl Huber, M. D., Junior Professor of Anatomy and Histology, and Director of the Histological Laboratory, University of Michigan, Ann Arbor. With 214 colored figures on 80 plates, 68 text-illustrations, and 248 pages of text. Philadelphia and London: W.B. Saunders & Co., 1903. Toronto: J. A. Carveth & Co. Cloth, $4.50 net.

This work combines an abundance of well-chosen and most accurate illustrations with a concise text, and in such a manner as to make it both atlas and text-book. The great majority of the illustrations have been made from sections prepared from human tissues, and always from fresh and in every respect normal specimens. The colored lithographic plates have been produced with the aid of over thirty colors, and it is evident that particular care was taken to avoid distortion and assure exactness of magnification. The text is as brief as possible; clearness, however, not being sacrificed to brevity. The editor of the English translation has annotated and altered very freely certain portions of the sections on the adenoid tissues, blood and the blood-forming organs,

muscular tissues, special sense organs, and peripheral nerve distributions, making these parts conform to the latest advances in the study of these tissues. The work will be found useful as an atlas, text-book, and book of reference for student and practitioner. We strongly recommend it.

American Edition of Nothnagel's Practice.

DISEASES OF THE PANCREAS, SUPRARENAL CAPSULES AND LIVER.

By Dr. L. Oser, of Vienna ; Dr. E. Neusser, of Vienna ; and Drs. H. Quincke and G. Hoppe-Seyler, of Kiel. The entire volume edited, with additions, by Frederick A. Packard, M. D., late Physician to the Pennsylvania and to the Children's Hospitals, Philadelphia ; and Reginald H. Fitz, M. D. ; Hersey Professor of the Theory and and Practice of Physic, Harvard University Medical School, Boston. Handsome octavo of 918 pages, illustrated. Philadelphia, New York, London : W. B. Saunders & Company, 1903. Toronto : J. A. Carveth & Co. Cloth, $5.00 net ; Half Morocco, $6.00 net.

This book combines in one volume the sum of our knowledge concerning diseases of the Pancreas, the Suprarenal Capsules, and the Liver. Any contribution on these subjects is of great interest to the profession, and these monographs, proceeding from such distinguished investigators, will be found of unusual importance. In the sections on the Pancreas and the Suprarenals, the numerous experiments upon animals cited will be of the greatest value to the pathologist, the clinician, and the pathologic anatomist, affording an insight into the more deep-seated processes, and offering an opportunity of comparing the disturbances of function produced by morbid conditions experimentally induced, with bedside and autopsy observations. In editing these sections the editor has availed himself of the writings of Korte and Mayo Robson, especially the latter's important treatise on the etiology and treatment of chronic pancreatitis. An editorial addition to the section on the Suprarenal Capsules, which seems especially noteworthy, is the investigations and discoveries on the active principles and therapeutic properties of suprarenal extract.

The excellent article on the Liver is as thorough and complete as those on the Pancreas and Suprarenals. Dr. Packard's careful clinical work, and his interest in the diseases of the Liver, mark him as the most suitable person to edit this article. A survey of this work shows numerous critical additions, embodying the very latest contributions, besides expressions of his own views regarding subjects under discussion. He has devoted special care to diagnosis and treatment, including the surgical procedures that have recently found their place in this field. With these numerous editorial additions the articles are brought fully up to date, and have no equal in our language.

A TEXT BOOK OF DISEASES OF THE EYE, FOURTH EDITION, REVISED, ENLARGED, AND ENTIRELY RESET.

A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. De Schweinitz, A. M., M. D., Professor of Opthalmology in the University of Pennsylvania, etc. Fourth Edition, Revised, Enlarged, and entirely Reset. Octavo volume of 773 pages, with 280 text-illustrations and 6 chromo-lithographic plates. Cloth, $5.00 net ; Sheep or Half Morocco, $6.00 net. Philadelphia and New York, W. B. Saunders & Co. Agents J. A. Carveth & Co. Toronto.

When a book reaches its fourth edition in a short time there must be something of decided value in it. This work, written by an active teacher of opthalmology, certainly deserved the popularity given the former editions. General optical principles and refraction occupy 174 pages and these subjects are written in a very clear manner, enabling the student of opthalmology to gain a clear and full insight of this important part of his work. The two pages directed to " spectacles and their adjustment " are of distinct value. The correct setting of lenses is too often disregarded, for a correct lens may be unsatisfactory because it has been badly placed before the eye. The chapter on diseases of the lids is profusely illustrated. In the chapter devoted to diseases of the conjunctive (55 pages) more than usual space is devoted to treatment and only those drugs and measures that have been found of real service have been mentioned. In connection with diseases of the cornea the author insists that the nose and naso-pharynx should have strict attention. The author says "the lacrymal passage must be kept clear in cases of suppurative kratitis." This is sometimes a very difficult matter and in cases of old dacryocystitis abrasions of the cornea are nearly always followed by a most severe suppurative keratitis. In these cases one is safer to ligate the canaliculi and thus shut off the supply of poison. Of the chemical caustics used in corneal ulcers tinct. iodine has given the author the most satisfaction. In children, the author has frequently found the corneal inflammation to be due to faulty teeth.

The chapter devoted to glaucoma is unusually good and the directions for the management of this dangerous disease are very clearly and fully given. Diseases of the retina and optic nerve are illustrated by a number of colored plates. An unusually large amount of space is given to the "movements of the eyeballs and their anomalies." This space is well used and the subject treated in a very clear manner. The author is in this chapter not a faddist but gives the procedures he himself finds of most value. In cases of stricture or obstruction of the nasal duct the author says (page 626) "in nearly every case of disease of the lacrymal sac and of the lacryomo-nasal duct morbid conditions of the nasal chambers and of the naso-pharynx are present."

Under the head of extirpation of the lacrymal sac no mention is made of the rapid and certain method of putting a bead of silver nitrate into the sac. This will very rapidly destroy the *entire* mucous membrane. Eighty-two pages are devoted to operations and we think this the best and clearest part of the entire work. The illustrations are very profuse and clear. The general practitioner will find this chapter on operations, which includes and illustrates the most simple procedures, of very great assistance in his daily practice and all who read the work will admit that it is a clear and concise treatise on ophthalmology.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS.

A practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by Solomon Solis Cohen, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital, and to the Philadelphia, Jewish and Rush Hospitals; one time Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Vol. V. Prophylaxis, Personal Hygiene, Civic Hygiene, Care of the Sick. Illustrated. Philadelphia: P. Blakiston's Sons & Co. Toronto: Chandler & Massey. 1903.

The contributors to this volume are well-known, and include the names of Joseph McFarland, Henry Leffmann, Albert Abrams, and W. Wayne Babcock. This volume is a very suggestive one, and shows how much there is in the science of medicine other than drugs. The editor has rendered a real service in bringing so much valuable information before the notice of the profession on the subjects of climatology, sanitary science, the care of the sick, public hygiene, etc. This volume, with the others in the series, makes a splendid reference library upon these subjects. The illustrations are good, and the make-up of the book in keeping with the reputation of the well-known publishers. This series of volumes occupies a unique place in medical literature, covering as it does the wide domain of electrotherapeutics, climatology, dietotherapy, mechanotherapy, rest treatment, hydrotherapy, pneumotherapy, serotherapy, and the present volume. We can very cordially recommend these volumes to the medical profession.

THE INTERNAL SECRETIONS AND THE PRINCIPLES OF MEDICINE.

By Charles E. De M. Sajous, M.D., Fellow of the College of Physicians of Philadelphia, etc., etc., etc. Volume First, with Forty-two Illustrations. Philadelphia: F. A. Davis Company, Publishers, 1903.

A SHORT time ago we announced that this work was well under way. We have now had the pleasure of perusing the first volume. It

is truly a work of fundamental principles. The author in this volume discusses at great length the Adrenals, the Pituitary Bodies, Internal Secretions in Relation to Immunity, and the Internal Secretions and the Preservation of Life. A vast amount of information is gathered together in this volume. The inter-relationship between the adrenals and the thyroid and thymus glands is dwelt upon fully.

A study of the book throws much light upon the important subject of auto-intoxication. When the suprarenal glands become diseased the system becomes poisoned. Following upon this poisoning there are a long chain of effects, as derangement of the cardio-vascular, muscular, and nervous systems. But it is shown that the adrenals may be over-active as well as inadequate. The active principles of the adrenals are shown to have a decided influence on the function of the thyroid and thymus glands, on the pituitary body, and on the salivary, lacrymal, sudoriferous and mammary glands. Indeed, through the nervous and vascular systems the suprarenals influence the liver, the spleen, and the pancreas; and thus exercise a marked power over the metabolism of the body.

The sections of the book treating of the internal secretions in their relations to immunity are most interesting. The relations of the adrenals to phygocytosis, the bacterial alexins, the vulnerability of children to infectious diseases, the tuberculin test, and antitoxic serum, afford much food for reflection.

The last portion of the book deals with the power of internal secretions in the preservation of life. The limits of serum therapy and immunizing medication are carefully examined. The book can be said to be one that opens up a new line of study, and cannot but give a material impulse to that phase of the philosophic pathology of disease, in which the derangements of the secretions of the various glands of the body play so prominent a part. We feel sure that this work will be widely read.

A TEXT-BOOK OF PRACTICAL MEDICINE.

By William Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College, New York; Physician to the Presbyterian and Bellevue Hospitals, New York. Second edition, revised and enlarged. Illustrated with sixty-two engravings. Lea Brothers & Co., Philadelphia and New York. Price, Cloth, $5; Leather, $6; Half Morocco, $6.50.

Professor Thompson's Practical Medicine is no longer a stranger. The first edition appeared three years ago. An examination of the present, second, edition clearly shows with what care the revision has been

performed. The work consists of over one thousand pages. He discusses the various diseases under the headings Infectious Diseases, Digestive System, Glandular System, Vascular System, Respiratory System, Urinary System, Nervous System, Muscular System, Miscellaneous Diseases, Poisons and Drug Habits. Among the infectious diseases the author includes acute rheumatism and hydrophobia. Acute anterior poliomyelitis is grouped with nervous diseases. There are some who would classify it with the infectious diseases. No mention is made of the infectious theory of the disease. Arthritis deformans and osteitis deformans are given as among the trophic and vaso-trophic disorders. At the present moment there are high authorities who group arthritis deformans with the chronic infections. All this only goes to show that there is much in medical science that is not yet settled. On the whole, the work is got up in attractive form and ably written, and forms a trustworthy text-book on the practice of medicine.

A MANUAL OF PRACTICAL HYGIENE FOR STUDENTS, PHYSICIANS AND MEDICAL OFFICERS.

By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second edition, revised and enlarged. Illustrated with twelve plates in colors and monochrome, and one hundred and thirteen engravings. Lea Brothers & Co., New York and Philadelphia. Price, Cloth, $4.25.

The contents of this work are food, air, soil, water, habitations, schools, sewage, garbage, disinfection, military hygiene, naval and marine hygiene, tropical hygiene, insects and disease, hygiene of occupation, vital statistics, personal hygiene, vaccination and other preventive inoculations, quarantine, disposal of the dead. This is a full bill of fare. Under these various headings is given a large amount of the most recent views upon the topics discussed. The illustrations are good and add much to the usefulness of the book. The work is a safe guide on the important subjects of which it treats. The author and publishers are both to be congratulated upon having given the profession so useful a manual on the very interesting subject of hygiene, for preventive medicine is assuming a large place in the thought of medical men.

A TEXT BOOK ON THE DISEASES OF THE EAR, FOR STUDENTS AND PRACTITIONERS.

By Professor Dr. Adam Politzer, of Vienna, translated at the personal request of the author, and edited by Milton J. Ballin, Ph.B. M.D., and Clarence L. Heller, M.D. Fourth edition, revised and enlarged, with 336 original illustrations. Lea Brothers & Co., Philadelphia and New York, publishers. Carswell & Co., agents, Toronto.

It is absolutely impossible to review, in a somewhat limited space, such a classical work as this. Those whose special practice is con-

fined to the eye and ear have long recognized Politzer as the father of otology, and as the first authority on diseases of the ear. The translators have been able to give the English text in very simple language. This is frequently not accomplished in books that are translations, and many practitioners object to buying a foreign work because of the difficulty of absorbing what they read. Politzer's book is one the general practitioner should have, because it contains everything of value in otological practice, written in very simple language, and profusely illustrated.

The methods of examining aural patients, the use and their meaning of the various tests for the detection of auditory defects, are very clearly and fully given. Treatment throughout the entire book is unusually fully mentioned. Pathological anatomy could not be neglected in a work written by Adam Politzer. The chapter on sclerosis of the middle ear is splendid, and is enhanced greatly by many excellent illustrations. Ear disease and Life Insurance, Nasal and Naso-Pharyngeal Catarrh and Adenoids, are treated in so far as they affect the ear. The prescriptions commonly used in "Politzer's Clinic" are appended to the book. The book contains 700 pages and is excellently printed and well bound.

A TEXT BOOK OF PHARMACOLOGY AND THERAPEUTICS, OR THE ACTION OF DRUGS IN HEALTH AND DISEASE.

By Arthur R. Cushny, M.A., M.D., Aberd.; Profesoor of Materia Medica and Therapeutics in the University of Michigan; formerly Thompson Fellow in the University of Aberdeen, and assistant in the Pharmacological Institute of the University of Strassburg. Third edition, revised and enlarged octavo, 750 pages; illustrated with fifty-two engravings. Lea Brothers & Co., Philadelphia and New York. Price, Cloth, $3.75 net; Leather, $4.75 net.

The very fact that within eighteen months of the publication of the second edition, a new one is required, speaks for the popularity of this work. Dr. Cushny has not attempted to rewrite the whole book, but has put in such necessary corrections and additions as are indicated by the progress made in pharmacology during the past two years. The general scheme, then, which is followed, remains the same as before, namely, to illustrate the action of drugs by means of experiments on animals, and apply the results obtained to therapeutic practice; hence it is not the place of the reviewer to refer to the whole subject matter but rather to touch upon the points which are new.

The article on Alcohol has been materially extended, and the results of the experiments conducted by Neumann, Atwater and Benedict, have been recorded, the general conclusions being that alcohol can, under cer-

tain conditions, replace a chemically equivalent amount of fat in the dietary.

Under the heading, Cocaine, there is found an admirable account of spinal cocainization, and Schleich's method of obtaining local anæsthesia—neither of these subjects having been touched upon in the first edition—with a short discussion of the limitations and uses of each. The writer thinks that spinal cocainization will never replace general anæsthesia, but that it will be reserved for special cases.

The most substantial addition to the work is found under the head of suprarenal or adrenal glands, for besides the experiments on the physiological action of the extract, we have a very clear and concise article on the general and local effects from its administration. Taken by mouth it is said to give no results, and even when administered hypodermically its action is nil; however, if directly injected into a vein, it will cause a sudden rise in blood pressure, and it is suggested that this last method might be adopted in cases of heart-failure from chloroform, as it is of great use in similar conditions in animals.

These new articles, together with a list of drugs, classified according to their therapeutic uses, has increased the size of the book by some 20 pages, and the best possible use has been made of this slight increase to the bulk of the volume.

A TEXT BOOK OF LEGAL MEDICINE AND TOXICOLOGY.

Edited by Frederick Peterson, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Toronto, Canada, J. A. Carveth & Co., 413-415 Parliament St. Per volume: Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

This work presents to the medical and legal professions a comprehensive survey of forensic medicine and toxicology in moderate compass.

For convenience of reference the treatise has been divided into two sections, Part I and Part II, the latter being devoted to Toxicology and all other portions of legal medicine in which laboratory investigation is an essential feature. Under "Expert Evidence" not only is advice given to medical experts, but suggestions are also made to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described, and the advantages of each stated. An interesting and important chapter is that on "The Destruction and

Attempted Destruction of the Human Body by Fire and Chemicals ;" for on the determination of the human or animal source of the remains frequently depends the legal conduct of a given case, and the guilt or innocence of the accused. A chapter not usually found in works on Legal Medicine, though of far more than passing significance to both the medical expert and the attorney, is that on the medicolegal relations of the X-Rays. The responsibility of pharmacists in the compounding of prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, etc., furnishes a chapter of the greatest interest to everyone concerned with questions of medical jurisprudence. Also included in the work is the enumeration of the laws of the various States relating to the commitment and retention of the insane. In fact, the entire work is overflowing with matters of the utmost importance, and expresses clearly, concisely, and accurately the very latest opinions on all branches of forensic medicine and toxicology.

Saunders' Medical Hand-Atlases.

ATLAS AND EPITOME OF DISEASES OF THE MOUTH, PHARYNX AND NOSE.

By Dr. L. Grunwald, of Munich. From the Second Revised and Enlarged German Edition. Edited, with additions, by James E. Newcomb, M.D., Instructor in Laryngology, Cornell University Medical School ; Attending Laryngologist to the Roosevelt Hospital, Out-Patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London : W. B. Saunders & Co., 1903 ; J. A. Carveth & Co., Toronto. Cloth, $3.00 net.

In designing this atlas the author has kept constantly in mind the needs of both student and practitioner, and, as far as possible, typical cases of the various diseases have been selected. The illustrations are described in the text in exactly the same way as a practised examiner would demonstrate the objective findings to his class, the book thus serving as a substitute for actual clinical work. The illustrations themselves are numerous and exceedingly well executed, portraying the conditions so strikingly that their study is almost equal to examination of the actual specimens. The editor has incorporated his own valuable experience, and has also included extensive notes on the use of the active principle of the suprarenal bodies in the materia medica of rhinology and laryngology. The work, besides being an excellent atlas and epitome of the diseases of the mouth, pharynx, and nose, serves also as a text book on the anatomy and physiology of these organs. Indeed, we wonder how the author has encompassed so much within such a limited space. We heartily commend the work as the best we have seen.

TUBERCULOSIS.

Recast from lectures delivered at Rush Medical College, in affiliation with the University of Chicago. By Norman Bridge, A.M., M.D. Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12mo volume of 302 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, $1.50 net.

In this excellent work the practical side of the care and management of those sick with the various non-surgical forms of tuberculosis has been concisely stated. Full consideration has been given to prophylaxis, an all-important phase of the subject that has heretofore been much neglected. There are also chapters upon the Bacillus of Tuberculosis; on the Pathology, Etiology, Symptoms, Physical Signs, Diagnosis, and Prognosis of the disease, each treated in the judicious and thorough manner to be expected in a work by such a well-known authority as Dr. Bridge. Treatment is accorded unusual space, there being chapters upon Hygienic Treatment, Management of the Diseased Lung, Climatic Treatment, Medicinal and Local Treatments, Special Treatments, besides a chapter devoted to the subject of Sanatoria. Altogether the work is a most valuable one, and we heartily recommend it to practitioners as the latest and best work of its pretensions it has been our good fortune to review.

REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES.

Embracing the entire range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City. Vol. V. Illustrated by chromo-lithographs and five hundred and seventy-six half-tone and wood engravings. New York: Wm. Wood & Co. Price per Volume, $7.00 cloth.

This volume contains articles from "Inflammation" to "Mosquitoes." What has been said of the previous volumes can be said of this volume. Every feature of an excellent publication is embodied in these volumes. The articles are reliable in matter, they are of convenient length for reference, the illustrations are as good as it is possible to make them, the paper is of superior quality, and the typography very clear.

While there are many encyclopædias on medical and allied sciences, there is none to take the place of Woods' Reference Hand-Book. It is not limited in scope to medicine, or surgery, or chemistry, or therapeutics, but covers the entire field of thought and study coming within the range of the medical practitioner in the broadest sense of the word.

From constant use of these volumes we can speak in the highest terms of their great value.

SURGICAL ANATOMY.

A Treatise on Human Anatomy in its Relation to the Practice of Medicine and Surgery. By John B. Deaver, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. In three Volumes. Illustrated by 499 plates, nearly all drawn for this work from original dissections. Vol. III., Abdomen; Pelvic Cavity; Lymphatics of the Abdomen and Pelvis; Thorax; Lower Extremity. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903.

Dr. Deaver's work on surgical anatomy is no doubt the leading work on this subject. It consists of three large volumes, most richly illustrated. The descriptions of the various plates and regions are clear and terse. They leave nothing to be desired. It is much to be regretted that such a work does not find a place in every doctor's library. It is a work that lays a sure foundation for all other medical and surgical study and work.

The plates are superb, and render the greatest assistance to the student of anatomy—and who that practices the healing art should not be such a student. The publishers have placed the entire medical profession under a deep debt in bringing within its reach this monumental work.

OPERATIVE SURGERY.

By Herbert Wm. Allingham, F. R. C. S., Surgeon to the Household of His Majesty the King; Surgeon-in-Ordinary to His Royal Highness the Prince of Wales; Senior Assistant Surgeon and Lecturer on Operative Surgery at St. George's Hospital; Consulting Surgeon to the Surgical Aid Society; late Surgeon to the Great Northern Hospital, and late Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1903. Price, 7/6.

This book is got up in a really handsome form. The paper, printing and illustrations are very attractive. It is bound in limp leather, and suitable for carrying about. The illustrations are exceedingly well done, and of such a character and selection as to aid the descriptions very materially. The accounts of the several operations are given in a short and concise manner, and in most perspicuous language. There are 215 illustrations throughout the text. All the operations of surgery are described. The book can be referred to with much confidence. We congratulate the author on the excellent book he has given the profession, and state the pleasure we have had in reading it.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METOBOLISM AND NUTRITION.

By Carl Von Noorden, Senior Physician to the City Hospital in Frankfurt. Part I., Obesity, the Indications for Reduction Cures. New York: E. B. Treat & Co. 1903. Price, 50c.

Dr. Carl Von Noorden has long been known as an ardent and scientific worker upon the disorders of metabolism, under which class

he includes diabetes, chronic nephritis, obesity, and colica mucosa. His opinions are entitled to much weight, and physicians will no doubt welcome the presentation of his opinions in English form We can say that under the direction of Dr. Boardman Reed the translation has been excellently done. We have read this little book with much pleasure, and feel sure it will not disappoint those who turn to its pages for advice on the question of obesity and reduction cures.

PRACTICAL POINTS IN NURSING. THIRD EDITION. THOROUGHLY REVISED.

For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose Lists and a full Glossary of Medical Terms and Nursing Treatment. By EMILY A. M. STONEY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. *Third Edition. Thoroughly Revised.* Handsome 12 mo. of 458 pages, fully illustrated, including 8 colored and half-tone plates. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Toronto, Canada, J. A. Carveth, & Co., Limited, 413-415 Parliament St. Cloth, $1.75 net.

The continued and increasing popularity of this little volume has placed the publishers under the obligation of keeping it abreast of the times, of making it reflect the latest advances in the progressive profession of nursing. The revision has been extensive, every page showing evidences of careful scrutiny. Considerable portions of the work have been either amended, modified, or amplified in accordance with the progressive spirit of medicine and its indispensable handmaid, nursing The sections treating of certain diseases, especially the infectious diseases, as well as the treatment of the common poisonings, have been in large part recast and rewritten. By the extensive revision the usefulness of the book has been greatly extended and its trustworthiness enhanced. There is no doubt that the work in its third revised form, will maintain the popularity justly won by the earlier edition.

THE CARE OF THE BABY. THIRD EDITION, THOROUGHLY REVISED.

A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease, by J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia. Third edition, thoroughly revised, handsome 12 mo. volume of 436 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, $1.50 net.

Dr. Griffith's manual on the care of the baby is without question the best work on the subject we have seen. The fact of a third edition

being called for within such a short time, is sufficient evidence of its popularity. In preparing this edition every part of the book has been carefully revised and brought fully in accord with the latest advances in the subject. Several new recipes have been included in the appendix, making this excellent part of the work even more complete than before. A large number of new illustrations have been added, greatly increasing the value of the book to mothers and nurses. As we mentioned above, of the many works on this important subject that have come to our desk, this is, undoubtedly, the best, distinguished by soundness of advice conciseness of expression, and clearness of style. Physicians could not perform a better service for their patients than the recommending of this excellent work to every mother.

MEDICAL JURISPRUDENCE, INSANITY AND TOXICOLOGY. THIRD EDITION, THOROUGHLY REVISED, ENLARGED AND RESET.

By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third edition, thoroughly revised, greatly enlarged, and entirely reset. Handsome 12mo volume of 329 pages, fully illustrated, including four colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903; J. A. Carveth & Co., Limited, 413-415 Parliament st., Toronto, Canada. Cloth, $1.75 net

This work is based on the author's practical experience as Coroner's Physician of the city of Philadelphia for a period of six years. Dr. Chapman's book, therefore, is of unusual value to the medical and legal professions, presenting, as it does, the information gained from active participation in medicolegal cases. This third edition, enlarged by the addition of new matter to the extent of seventy-five pages, has been entirely reset, and it is evident that in its preparation every page has undergone a careful scrutiny, so as to include the very latest advances in this important branch of medical science. Much of the matter has been re-arranged, the text has been more fully illuminated by additional references to cases, and a number of new figures and tables have been added.

In reviewing this excellent work we have found that it covers the field completely and thoroughly, nothing of practical importance to the physician or lawyer having been omitted. In our opinion, there is no doubt that the work will meet with as great favor as the previous edition—a popularity which it certainly deserves.

W. B. GEIKIE., M.D., F.R.C.S., EDIN., L.R.C.P., LOND.,
Lately Dean Trinity Medical College.

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SURGICAL TREATMENT OF NEPHRITIS.*

By ALEXANDER HUGH FERGUSON, M. D., Chicago, Illinois.

Prof. Clinical Surgery, (P. & S.) Med. Dept. of Illinois University, Prof. Surgery Chicago Post-Graduate, Surgeon-in-Chief, Chicago Hospital, etc.

THE surgical treatment of nephritis or Bright's disease was the title of a paper published by me on the 11th of March, 1899, in the journal of the American Medical Association. This is the first anouncement that has ever appeared recommending a surgical treatment for Bright's disease. The date of this publication has been overlooked by Dr. G. M. Edebohls, in all his articles. Dr. Edebohls' first paper, entitled " Chronic Nephritis Affecting a Movable Kidney as an Indication for Nephropexy ", appeared in the *Medical News*, New York, on the 22nd of April, 1899, one month and eleven days after my first article.

On the 10th of February, 1899, a symposium on nephritis was the program of the Chicago Academy of Medicine, and the surgical treatment was assigned to me. At this meeting I related two cases of interstitial nephritis symptomatically cured by decapsulation and multiple punctures. I removed a portion of the kidney in each case, which was pathologically reported on by Drs. Klebs and Zeit and they pronounced it interstitial nephritis. In these two instances no positive diagnosis was made before operating.

At that meeting I related several earlier cases, but inasmuch as I had not examined a section of kidney tissue microscopically in any of them, I thought it wise not to publish anything but the two cases in which that was done. Dr. R. B. Preble, while denouncing splitting o the capsule, etc., as dangerous and useless, terminated his remarks as follows: " While Dr. Ferguson's paper was interesting, still the bulk of the cases do not apply to nephritis at all (claiming that my diagnosis was in error), and the latter cases which were demonstrated to nephritis have not recovered from their nephritis, but have been relieved of a purely subjective symptoms." (Journal A. M. A., March 11, 1899.) Time has proven him to be wrong.

History. In the *New York Medical Journal*, May 17, 1902, appeared an article from the pen of Guiteras, on the " Surgical Treat-

*Read before the American Medical Association at New Orleans, May, 1903.

ment of Bright's Disease," in which he gave an excellent historic review of work leading up to this subject. He, too, overlooked my first publication, March 11, 1899. He gives the more recent developments, and has added three cases operated on by himself. It is my intention in this short paper to briefly give the evolution of the surgical treatment of nephritis, and add a few more cases of this disease treated surgically.

Reginald Harrison made a mistaken diagnosis in three kidney cases (1878, 1887 and 1893) of an abscess in one and stone in the other two. He cut down upon them and found acute nephritis instead. It was fortunate for his patients that he and his associates were in error, for the operation cured the patients, and let me ask if in these cases a diagnosis of acute nephritis had then been made, would the knife have been recommended ? I think not !

Newman (1896) observed in two cases the beneficial influences fixation of the kidney had on albuminuria.

In 1899, Tiffany successfully incised the capsule and parenchyma of a kidney affected with chronic nephritis, complicated with nephralgia.

In 1886, Péan removed a kidney for nephralgia and chronic nephritis.

In October, 1899, Pousson collected 25 cases, and added two of his own: hematuric nephritis, 10 cases; nephritis with nephralgia, 2 cases; subacute infectious nephritis, 4 cases; acute infectious nephritis, 9 cases. The kidney was removed in 11 of these, opened in 13, and explored in one, with 21 reported cured. These operations mentioned by Pousson included those of Harrison, Weir and Israel, and were undertaken, not with the object of curing bright's disease, acute or chronic, but for some suspected surgical condition, such as abscess, tumor, stone, etc.

In 1899, Israel reported 14 cases of hematuria and nephralgia treated by nephrotomy. In 12 of these there was evidence of chronic nephritis. It must be remembered that Israel did not aim at a surgical treatment for bright's disease, and recommended an operation only when there was hematuria or nephralgia.

In November, 1890, Naunyn, in writing of nephrotomy for bleeding in nephritis, stated that "nephrotomy may some day play a far greater role in the treatment of Bright's disease."

Edebohls, in April 22nd, 1899; 1901, and 1903, has given to the medical world his conceptions of the surgical treatment of nephritis, his operations and results. I wish here to commend that work. He observed the beneficial effects of nephropexy eleven years ago. "My first case was operated upon as long ago as Nov. 29, 1892; my fifth upon April 1, 1897." (Edebohls, *New York Medical Record*, Dec. 21, 1901.) In

speaking of his sixth case, in the same article, he says: "This operation, performed on Jan. 10, 1898, constitutes the first operation ever undertaken upon the kidney with the deliberate purpose of curing chronic Bright's disease, and in so far marks a period in the history of the affection."

This case was published in his first paper (April 22, 1899), after my first publication.

Dr. Edebohls' example has been followed, and we are here and there hearing of good results from other surgeons. Physicians in the first rank recognize that there is a surgical treatment for nephritis. To Dr. Edebohls is due the credit of individually working out this surgical treatment, and operating on more cases of Bright's disease than any other surgeon. While I am constrained to claim priority (first in publication), I cannot but feel proud of the distinction and record the doctor has made for himself, in trying to solve the limitations of kidney decapsulation in nephritis. In the *Medical Record*, New York, (March 28, 1903,) Dr. Edebohls publishes his experience, which amounts to no less than 51 cases treated by operation. It will be seen in the description of my experience, our work has been developing contemporaneously.

I shall now very briefly refer to the development of kidney surgery before giving my personal work on nephritis. It is only thirty-five years since the kidneys have been operated on at all. Like many of the other internal organs of the body, diseases affecting them were treated by internal medication. We can appreciate how Peaslee (1868) felt when he removed a kidney by mistake, taking it for a solid ovarian tumor. Although the patient died on the third day of peritonitis, two lessons have been learned by his mistake. First, the feasibility of nephrectomy, and, second, that the urine was secreted abundantly by the other kidney.

Spencer Wells' case also died, but not from suppression of urine.

The following year (1869), Simon, of Heidelberg, purposely and successfully attacked the kidney for a ureteral fistula in a woman. I have no doubt that his experiments on dogs in this line better fitted him to successfully perform the operation.

Within seven years after the first removal of a kidney by Peaslee, no less than 233 nephrectomies were collected by Gross. It would take some considerable time to reckon the number of nephrectomies up to date. The operation was extended beyond its reasonable and legitimate limits. Chief among the indications for the removal of a kidney were stone, pyonephrosis, hydronephrosis, tuberculosis, floating kidney, nephralgia, hematuria, and tumors.

Nephrotomy for stone (nephrolithotomy) was first performed by Morris of London, only twenty-three years ago, (Feb., 1880). Then nephrotomy gradually supplanted nephrectomy in many cases.

Nephropexy, by Hahn, (1881), was the next important advance in renal surgery.

Personal Experience.

In 1889, I explored a kidney suspected of containing a stone, in a young man, 24 years of age, suffering with renal colic. There was blood in the urine, and the kidney was very tender on pressure. The exploration consisted in exposing the organ and passing a darning-needle, blunt end foremost, through it in many directions. No stone was found, but temporary relief from pain and hemorrhage was given. Within a year afterwards he returned to see me. Bright's disease became more and more marked, and four years afterwards he died of parenchymatous nephritis.

In my early fixation of floating kidneys, I used a stout cord of chromic catgut, and passed it through them four or five times, and while using this stout cord, no complaints came from our patients after the operation. But just as soon as we began to use fine catgut or silk, and grasp only the capsule, two cases returned, complaining of pain, as before, although the kidneys remained fixed. In 1900, I explored one of these for stone with the knife; found nothing; had free hemorrhage, which was checked with iodoform gauze. This made a symptomatic cure; the nephralgia completely subsided, and she is now well. After this I did some fixations by cutting through the capsule, rolling it a little to one side, and passing sutures through it and through kidney tissue as well, with satisfactory results.

My first decapsulation, deliberately undertaken, was for "Nephritis and Floating Kidney." In 1896, June 17, Edna L., aged 25, entered the Post-Graduate Hospital, complaining of a painful, tender, floating and enlarged right kidney. Urine scant, ℥xx in twenty-four hours; contained 30 per cent. albumin.

Operation. Nephrorrhaphy; capsule stripped off. Urine increased in quantity, and albumin decreased. Nephritis was diagnosed as a complication. Case lost sight of (hospital record).

"Double Decapsulation for Nephritis and Floating Kidneys."

On Sept. 9, 1897, Mrs. B. G., aged 30, entered the Post-Graduate Hospital, complaining of pain in the region of both kidneys. She had been suffering for twelve years, particularly from her right side. She was operated on three years previously for ovarian abscess, and one year previously (in 1896) for right floating kidney. Had one child twelve years of age. Her father died at 30 years of consumption. Her urine was very abundant, pale, and contained a trace of albumin. She was

considered hysterical. Interstitial nephritis diagnosed. Both kidneys were floating freely. Capsule stripped from both kidneys, and sutured to lumbar fascia. She made a good recovery, and marvellously improved. Within six months she was able to do all her housework. No cure was expected in this case, decapsulation being performed with the object simply of relieving her pain and tenderness. She was, two years later, symptomatically cured of her Bright's disease. It then occurred to me that all cases of tender and floating kidneys were cases of interstitial nephritis, and from this date, (Sept., 1897), I expressed my convictions at my clinics.

"*Microscopic Examination of Kidney Tissue for the First Time.*" *Left Floating Kidney; interstitial nephritis (Bright's).* Decapsulation and puncture. (Reported in Journal A. M. A., March 11, 1899.)

Mrs. M., 37 years of age, and weighing 250 pounds, entered the Postgraduate Hospital complaining of just two symptoms: (a) Dizziness, and (b) pain in the region of left kidney. Taking morphine for the pain. Ill for three years. Began to have these symptoms after childbirth. Urine scanty, ℥xxiv. in twenty-four hours. Normal, except a few hyaline casts. Jan. 4, 1899, I decapsulated the kidney, made multiple punctures in it, fastened it up, and removed a portion for examination. The immediate relief was astonishing to all. Even the next day she declared she was free from her old pain. Microscopic examination of kidney tissue revealed interstitial nephritis. In 1900 she returned, complaining of pain in her pelvis, and through the vagina I removed a left ovarian cyst. At this time her urine was normal in quantity and quality, but occasionally, such as after a hard day's work, she had an aching feeling in her left side, for which electricity was used. I have heard from her repeatedly during the past year, and she is sympt matically cured, it now being over four years since the operation.

Interstitial nephritis (Bright's); right floating kidney. Decapsulation Nephrotomy (drainage); nephrorrhaphy. (Published in Journal A.M.A., March 11, 1899.)

Mrs. W., aged 26; chronic pain over right kidney, which was freely movable. Was taking from two to eight grains of morphine per day for the pain. (See full report.) Had two confinements, one miscarriage, pulmonary hemorrhage, trachelorrhaphy, chills and fever (supposed to be malaria), cholecystotomy, and, finally, I operated on her right, tender, floating kidney. Owing to the septic condition of her urine, I thought the kidney was septic also, but it was not. Microscopic examination of kidney tissue revealed the unmistakable changes of interstitial nephritis. The immediate result was admirable. The albumin and casts cleared

away before she left the hospital. From the first three days after the operation, she did without morphine, even though a habitué. Two years later she was well, and a later report brings the same good news.

INTERSTITIAL NEPHRITIS; NEPHROTOMY AND DRAINAGE OF LEFT KIDNEY.

March 16, 1899. Mrs. H.; aged 32. From Livery City, Iowa. Complains of pain and tenderness in the region of left kidney, which began two years previously, and then lasted with severity for twelve hours, and had bloody urine. During 1897 and 1898 she had several attacks of pain and tenderness, referred to her left kidney, sometimes passing blood in urine, and often accompanied with chills and fever. During the last six months the attacks were more frequent, but no blood was passed with the urine. Mild chills and feverish sensations accompanied nearly every attack.

Upon going over the case thoroughly, a diagnosis of recurrent interstitial nephritis was made. Nephrotomy was performed, and kidney drained for twelve days. Patient left the hospital after three or four weeks, with marked general improvement, and entirely relieved of her pain and tenderness over the kidney.

Specimen of Kidney microscopically showed interstitial nephritis.

INTERSTITIAL NEPHRITIS (LEFT). DECAPSULATION AND MULTIPLE PUNCTURES. GAUZE AND TUBE DRAINAGE TO KIDNEY.

June 28th, 1899. Mrs. C., aged 43; dressmaker. In August, 1898, frequent urination; pain in the back and over left kidney. Urine contained blood, albumin, casts; was highly colored and scanty, as reported by her attending physician at that time. Ever since this attack, kidney has been tender, but the urine has become abundant, three or four times the normal quantity, of low specific gravity (1005), and always contained albumin and usually casts. Menstruation began at fourteen and has been irregular. Œdema of feet and hands; eyelids swollen and eyesight poor. Had pneumonia three times; inflammation of the bowels twelve years ago (probably appendicitis); abscess (1893) in pelvis opened into vagina; gonorrhœa from her husband fourteen years ago (1885). Her mother died of ovarian tumor and interstitial nephritis. The region of the left kidney was quite tender. Urine segregated, and that from the left side showed the following changes: "The specific gravity of both specimens is so low that I thought a mistake had been made, and we got water for examination. Doubting whether this was urine at all, I tested for urea, and found 0.2 per cent. in both urines (should be 2 to 3 per cent.). There are some chlorides and phosphates, but the centrifuge

shows no sediment of any kind, except a few squamous epithelial cells and oil globules in both specimens. No albumin; no sugar in either specimen; reaction, neutral in both specimens; no bacteria found in either urine; no casts." (Zeit.).

Report of kidney tissue showed interstitial nephritis.

Left hospital in twenty-three days, improved in all her symptoms. In three months, urine much improved; symptoms of nephritis almost absent. At the end of six months she resumed her dressmaking. Her gain in general was slow, but gradual. During 1900 she had to cease working for a week out of every six or eight. In November, 1902, she was confined to her bed for two weeks, and house for three weeks longer, with influenza. Both kidneys were sore and tender, but fortunately no active inflammation of them manifested itself. It was fully four months before she regained her usual health. Now, she replied, "I am well; that is, much better than before the operation. I am working all the the time, but have to be careful. But I enjoy life. It makes me feel happy that for six months there has not been a trace of albumin in my urine."

Nephritis. Decapsulation. April 2nd, 1901. Mrs. D., Redland, Iowa. Post-Graduate Hospital. Aged 34. Complains of:

1. Constant pain in the region of the right kidney, with some pain in the left off and on.
2. Inability to work for the last two years.
3. Urine irregular in quantity.
4. Shooting pains into back and thigh. Pain often severe all night, and during the day it is increased on motion.
5. Weakness, dizziness, constipation and palpitation of the heart.

Had a child two years ago, and has not been well since then. When fifteen years of age, was struck in the right inguinal region with a base-ball, following which she had colicky pains in that region for some time. Family history negative. Urine too abundant, ℥ cxvi. in twenty-four hours, of low specific gravity, 1005; a trace of albumin; no sugar; casts, granular, hyaline; and contained indican.

A diagnosis of interstitial nephritis was made.

Operation. Decapsulation of right kidney. At the end of the third week urine in quantity only ℥xlv in twenty-four hours, and much freer from casts. (Portion of kidney removed was lost in the operating room.) The patient left the hospital on the twenty-third day, free from her painful symptoms. Recent report not given. A year after the operation she was symptomatically relieved, and felt that she was cured.

Movable Kidney and Nephritis. Decapsulation; multiple punctures.

Mrs. J.E.B.; aged 45; married. Admitted May 7, 1901; discharged July 2, 1901. Housewife; Swedish. Diagnosed movable kidney and nephritis.

Family History: Parents both died from some acute lung trouble at an advanced age. Has seven brothers and sisters living and well.

Personal History: Has always been well. Married at 39; no children; never pregnant.

Present Illness: About five years ago she noticed pain in the right side of the abdomen, above the crest of the ilium and in back. About one year later she discovered a lump in the right side. It was easily movable in any direction, the limit being the center of the abdomen, costal cartilages, and below to McBurney's point. Has no severe pains at this time. Has worn elastic bandage for some time. Was able, but with difficulty, to attend to her household duties. For the last six months a dull, aching pain in the region of the kidney has been constant. Menses now regular and normal. Bowels constipated. Lost some weight.

Operation: Placed patient in saddle, which brought the kidney well up to parietes. Incision four inches long Stripped kidney of its capsule. Made multiple punctures and anchored as usual. Drainage of gauze in wound.

Urine Examination: Before operation, specific gravity 1018; acid reaction; slight albumin; hyaline and epithelial casts; no sugar. Temperature before operation, 98° to normal; pulse before operation, 80. Temperature after operation, maximum, 101°; pulse after operation, maximum, 110.

Result: Dr. E. M. Brown saw the patient December, 1902. She was then entirely well.

Parenchymatous Nephritis and stone. Decapsulation and Nephrotomy.

Mr. F. R., aged 38, of Luther, Indiana, entered the Post-Graduate Hospital on the 26th of June, 1901. Complained of (*a*) pain in left side, running down to the testicle; (*b*) attacks of sharp pains laying him up; (*c*) urine scanty, and high-colored. He passed gravel a year ago, after an attack of renal colic; then got some relief. The last few months the attacks have been more frequent, and recently the pain in the region of

the kidney has become constant. The urine contained pus, blood, casts, bacteria, albumin, increase of chlorides, and some bile.

Operation: Decapsulation was made, because the capsule was firmly adherent. Nephrotomy was then performed, and several small calculi removed. Removed a section of the kidney and drained the kidney with a tube. This tube was left *in situ* until the discharge was free from pus and germs. He made a good recovery, left the hospital on the 19th of July, 1901, free from pain, and greatly improved in his general health. The pathological report of tissue by Zeit and Klebs was that of parenchymatous nephritis, with cloudy swelling, degenerated epithelium, with granular and epithelial casts in tubes.

Result: Both immediate and remote, excellent.

RIGHT FLOATING KIDNEY; SUBACUTE NEPHRITIS. DECAPSULATION AND NEPHRORRHAPHY.

Admitted April 16, 1902. P. and S. Clinic. Discharged May 18, 1902.

Condition improved. Examined by Dr. E. M. Brown, March, 1903. Well.

Miss H., single; aged 32; musician; American.

Family History: Father and mother living and well. Four sisters and one brother living and well. One sister died during confinement.

Personal History: Diseases of Childhood. Always well until ten years ago, began to get pale and weak. Exhausted upon the least exertion, also very nervous. Bowels constipated. Appetite fair. Uncomfortable after eating. Began menstruating at the age of thirteen years. Always regular; but painful. Eight years ago had dilatation and curettement for painful menstruation.

Present Trouble: About eight years ago the patient had a fall from horse, since which time she has noticed a lump in the right side of abdomen, which is quite movable. Also complains of pain in right groin and appendiceal region. Tenderness of gall bladder also.

Urine Examination: On admission, color amber. Specific gravity, 1012. Reaction acid. Albumin, none. Sugar, none. Epithelial and granular casts. Urates and mucus.

Operation: Usual kidney incision; kidney brought up and stripped; anchored to fascia. One strip gauze for drainage. Appendix found suspicious and removed. Microscopic examination of removed section of kidney shewed slight changein interstitial tissue and parenchyma.

Temperature, before operation, normal to 99°.

Pulse, before operation, 76 to 90.

Temperature, after operation, Max., 101.06°.
Pulse, after operation, Max., 112.
(Synopsis by Dr. E. M. Brown.)
Recovery uneventful.

DISPLACED AND FIXED KIDNEY. DECAPSULATION AND NEPHRORRHAPHY.

April 22, 1902. Mrs. B., of Ashkum, Ill., aged 33. Referred by Dr. Ernest. Entered Chicago Hospital complaining of (1) pain in abdomen, especially on the right side; extreme tenderness on pressure; (2) Intense pain, as if on fire, which patient insisted was the case; (3) great weakness, loss of weight and strength; (4) considerable derangement of mental and physical condition.

History of Illness: Very unsatisfactory history, except that symptoms began after an attack of measles, followed by typhoid in February last, since which time patient has been gradually growing worse. In bed, and unable to rise for over three months.

Physical examination revealed a firm, movable tumor, of the shape of a kidney, on a level with the umbilicus on the right side. This could not be returned to the kidney fossa.

Urine : Specific gravity, 1014 ; urea, 2.2 per cent. ; albumin, peptone, indican, pus, epithelia, cylindroids and phosphates all present.

Feces : No pus or blood, very fetid.

Blood : Hemoglobin, 45 per cent. ; red corpuscles, 4,500,009 ; leucocytes, 11,000 ; no Widal reaction.

Treatment : Exploratory incision down on tumor, which proved to be the kidney. All the abdominal organs examined and found normal. Incision closed. Lumbar incision made and kidney drawn up into it Kidney congested and capsule thick and firm. Capsule stripped off and section of it and kidney removed for examination. Kidney sutured in place and drained with gauze, and incision partly closed. Patient transfused, 1,000 c.c. of normal salt solution on table.

After-Treatment : Patient given normal salt, one pint per rectum every four hours for several days, and liquids, *ad lib.*, by mouth. Pulse 120 and irregular. Temperature 102.8°. During first four days patient had involuntary bowel movements, after which she began to retain normal salt and rectal feeding. Wound received daily attention, and was kept clean.

On twelfth day temperature was normal and pulse stronger and regular. Patient was able to be up on the twenty-seventh day, and on the thirty-eighth day following operation was able to be taken home.

Pathological Report of Kidney : Specimen normal, except for a few inflammatory cells. Present condition, patient in good health and well.

Remark : I fail to see what my operation had to do with her recovery. (A. H. F.)

RIGHT FLOATING KIDNEY. DECAPSULATION AND NEPHRORRHAPHY. GALL STONES. CHOLECYSTOTOMY.

May 26, 1902. Chicago Hospital. Dr. McKibbon, referred.

Miss F., of Kalamazoo, Mich. Aged 24. Stenographer. Complains of (1) pain in right lumbar region, aggravated by exertion ; (2) some swelling of ankles and of eyes ; (3) headache and nervousness ; (4) loss of appetite and constipation.

Illness began two years ago with pain in right side, which pain extends up to shoulder and down right leg. In February last it became worse and patient is now in almost constant pain. Urine : Specific gravity, 1024 ; no albumin nor casts. . Epithelium (squamous). The kidney was found movable and prolapsed, and the gall bladder was palpable. Kidney decapsulated and punctured, and sutured to lumbar wall. Gall bladder drained after removal of stones from it and the cystic duct.

Kidney was drained for two weeks. Patient had temperature of 100° till the eighth day, when it rose to 104°. This was accompanied by great nausea and vomiting. Wound was dressed. Stomach washed out, and patient given hypodermoclysis, a pint and a half of normal salt, and a pint per rectum every four hours. Temperature dropped to normal in two days, and patient made a good recovery, leaving hospital on thirty-second day, with small sinus, which soon closed. Now satisfactorily relieved.

PARENCHYMATOUS NEPHRITIS. DECAPSULATION OF BOTH KIDNEYS.

August 19, 1902. Case referred by Dr. Wm. E. Quine.

Mr. B., aged 37. Complains of (1) pain in both kidneys, greater in right ; (2) highly albuminous urine ; (3) general anasarca and ascites, with pitting over tibiæ on pressure.

When attending college about seventeen years ago, patient contracted syphilis, for which he was treated three years and declared cured. Three years ago came to Chicago, suffering from anasarca, ascites and albuminuria. His life was despaired of, but by mercurial inunctions all symptoms except albuminuria cleared up. Patient was sent to warm climate, where he improved rapidly, stopped the treatment, grew worse, and under the doctor's instructions began treatment again. Improve-

ment now was slow and unsatisfactory. Recently patient has not been so well and was referred for decapsulation.

Right kidney is palpable and tender. Left kidney not palpable, but tender on pressing over it.

Urine: Twenty-four hours, ℥XXXII. Albuminous (50 per cent.) Granular casts in abundance. Pavement epithelia. Blood and bacteria present.

Operation. Right kidney exposed; the capsule which was firm and adherent, was stripped off and the kidney punctured. Gauze drainage inserted down to kidney.

Patient made good recovery. Urine began to increase from the beginning, ℥XLI on the second day. The albumin likewise decreased, until on leaving on the eighteenth day, there was only about-half of one per cent. There was a slight fistula which was rapidly closing.

Patient returned Sept. 30th, for operation on left kidney. Urine: Twenty-four hours ℥31. Albumin 2¾ per cent. Casts: Hyaline and granular. Left kidney drawn into wound and decapsulated. Drained down to kidney with plain gauze.

Patient made good recovery, leaving hospital on seventeenth day, with incision closed. Urine improved in quantity almost from the first day, the following being the daily quantities in ounces: 31, 31, 21, 32, 40, 53, 38, 58, 52, 66, 62, 82, 94, 65, 74. The albumin decreased to 3/20 of one per cent.

April 26, 1903. Mr. B. now reports that his general health is good, and sends the following report of his urine:

Twenty-four hours, ℥85; color, light amber; reaction, acid; specific gravity, 1015; albumin, 1-20 per cent, (by centrifuge); leucocytes, a few red cells, small, as if from the kidney. Renal cells, some fatty and a few fine and medium casts. Pathology: Microscopic examination of removed section shews parenchymatous nephritis with hyaline degeneration.

Floating Kidney: Decapsulation and Fixation.

October 4, 1902. Miss B., New Port, Wisconsin, aged 24, nurse. Complains of (1) severe pain in gall bladder, but no colic. (2) Jaundice, which is sometimes marked. (3) Pain in back, which radiates down the right iliac fossa and leg. (4) Drowsiness. (5) Puffiness of eyes and swelling of wrists and hands. (6) Temperature, 99° to 100°. (7) Loss of weight. Lassitude.

Urine normal. Has a soft compressible tumor continuous with the liver, and another movable and firm, which can be replaced to kidney fossa. Patient had a severe attack of pain radiating down the right leg in September, 1900, and a second in March, 1901.

In August, 1902, pains returned in right side, and shortly after this she noticed jaundice for the first time. A second attack compelled her to stop work, and after a short time she returned for operation.

The gall bladder was drained. The kidney was decapsulated and punctured freely several times, and drained; then sutured in place. Kidney drained two weeks, and closed. Patient made a good recovery.

Pathology: Microscopic examination reveals, practically, a normal kidney; the slight cloudiness and congestion being due to the chloroform and manipulations.

Present condition: Free from symptoms. Urine normal. Has some pelvic pain at and following menstruation.

Bright's Disease and Pelvic Disease. Decapsulation of one Kidney and Laparotomy.

Dec. 4, 1902. Mrs. J. C. W., Chicago, aged 41, housewife.

Complains of (1) backache; (2) pain in left side in lumbar region, extending up into shoulder and down into leg; (3) burning pain in feet, with swelling; (4) pain in pelvis; (5) dysmenorrhea; (6) headache, nervousness, sleeplessness; (7) frequent micturition; (8) nausea and at times vomitting; (9) constipation; (10) belching of gas after meals, but has good appetite.

Symptoms began eight years ago with nervous prostration. Following recovery she had a pelvic abscess, which was drained. Had excellent health until about two years ago, when she was treated for uterine troubles. Gives no good history as to when her kidney trouble began, but bladder has given her trouble for four or five years. Her kidney is easily palpable in abdomen, and replaceable to kidney fossa. She has some uterine displacement and strong pelvic adhesions, involving the ovaries and tubes.

Urine: Quantity in twenty-four hours, ℥ xxx; specific gravity, 1030. Strongly acid. Hyaline and granular casts. Epithelium—small, round, spindle and pavement. Red blood cells and leucocytes. Bacteria. Cylindroids. Uric acid. Calcium, oxalate and urates in heavy deposit.

Operation: Curettage. Freeing of pelvic adhesions. Removal of both tubes and part of each ovary. Kidney decapsulated, punctured, fixed and drained.

Patient's temperature for a week was from 101° to 102°. During the second week patient was wandering mentally, but later became rational and made a good recovery, leaving the hospital on the twenty-ninth day. Kidney tissue changes are both interstitial and parenchymatous.

Present condition: Relief of all symptoms (except the bladder). Gaining rapidly in strength and weight.

RIGHT FLOATING KIDNEY; NEPHRALGIA; DECAPSULATION; NEPHRORRHAPHY; APPENDECTOMY; KIDNEY TISSUE NORMAL.

February 25, 1903. Miss. H., Bradford, Ill., aged 24. Dr. Hawkins.

1. Burning pain in right kidney, with exacerbations. Pain radiating down in region of appendix, which region was also troubling her. 2. Pain over whole right side of abdomen, and down the right thigh. 3. Inability to work. 4. Loss of strength, and confined to the house. 5. Attacks of pain in lumbar region, which would disable her for a week at a time. Frequent and painful urination.

Patient has been complaining about three years, with symptoms referable to this kidney, and the pain in the region of the appendix was grafted on it in the last two months.

Right kidney floating, enlarged and tender. Kidney could be pushed down into the iliac region. There was also tenderness over the appendix.

Urine: ℥ XLV. Pale and clear. Specific gravity, 1007; neutral. Urea, 2-10 per cent. No albumin and no casts.

Operation: (1) Curettement and packing of uterus. (2) Appendix removed through kidney incision. (3) Kidney drawn up; decapsulated; capsule sutured to wall and incision closed.

Patient did well for three days following operation, when she had a slight rise in temperature to 99.6 degrees, and in pulse to 100, with pain in region of right ovary and tube, which spread over the whole abdomen. There was nausea and slight vomiting. Blood examination—57,800 leucocytes, mostly polymorphonuclear form.

On the fifth day incision opened and gauze drainage inserted. There was no exudate, and there were no signs of infection.

Patient continued with signs of peritonitis, and died on March 9th, just twelve days after operation.

Post-mortem held. Peritoneal cavity had considerable fibrinous exudate. Kidney and wound normal. Cultures sterile. Appendix stump normal. Right tube slightly inflamed. Left tube and its region congested and inflamed. Cultures shewed streptococcus. Descending colon as high as splenic flexure, and the sigmoid congested and inflamed, with fibrinous exudate. Cultures shewed streptococcus infection. Death caused by streptococcus infection; probably an old infection of the left tube lighted up by the curettement, or by an infection following the curettement, which is doubtful.

March 20, 1903. Mrs. H., Chicago; aged 48. Dr. Peacock. In Chicago Hospital. Dr. Ferguson, consultant in operating room. Patient complains of: (1) Pain in the back radiating down the right side and right thigh. (2) No urinary control. Up several times at night and during the day. (3) Pain in right iliac fossa.

Previous History: Ten years ago patient had ovaries removed. The commencement of pain is very indefinite, but it became quite severe during the last year.

The kidney is freely movable and quite tender. Urine: Specific gravity, 1020; acid; urea, 1.5; hyaline and granular casts; small round epithelium. Considerable blood.

Operation. Appendectomy, by Dr. Peacock. Kidney decapsulated and punctured. Sutured in position. Gauze drainage inserted down to kidney. Incision closed. Patient made good recovery, leaving the hospital on the nineteenth day.

Present Condition: Patient up and around the house. Relieved of all symptoms. Does not have to get up during the night, and urinates about every four hours during the day.

Observations.

For a synopsis of the histories of the foregoing cases I am indebted to my first assistant, Dr. Hugh Neil MacKechnie, and my associate, Dr. E. M. Brown. It will be observed that my personal experience dates back to 1889. In 1896, a nephritis in a floating kidney was deliberately treated by decapsulation, but not till the 4th of January, 1899, did I begin to remove sections of the deceased kidneys under treatment, and study them under the microscope. While the reports given above are incomplete, from lack of space, still it will be seen that our treatment was justified by the results. In the vast majority of my cases, the kidneys were movable, and also chronically inflamed. In only two cases was decapsulation carried out for parenchymatous nephritis. The results so far have been excellent, and astonishingly prompt. The symptoms of the cases, regarding urinary changes, digestive disturbance, nervous phenomena, skin signs, circulatory and respiratory changes, were recognized as not of the severest types of nephritis.

I did not operate on cases with urine extremely scant, very marked hypertrophy of the left ventricle of the heart, edema of the glottis and lungs, Cheyne-Stokes breathing, marked general anasarca, etc., etc. The urinary changes cannot be absolutely depended upon to indicate the tissue changes taking place in the kidneys till at least a late stage has arrived. It was noticed that a tender kidney is often relieved after its fellow has been decapsulated.

Pathology. The pathology, microscopically observed and handled on the operating table, and a study of the microscopic condition of the organ in a living patient are of superlative interest and importance. An enlarged kidney may have few or no histologic changes, while one normal in size is often surprisingly diseased. A contracted kidney is usually very much destroyed. The intimate relationship between the capsule and cortex of the kidney by adhesions does not give us an accurate idea of the extent of the inflammation. Neither does the appearance of the fatty capsule. The only scientific procedure to pursue to obtain anything like an accurate knowledge of the *status presens* of a kidney under operation is to remove a V-shaped piece of the cortical and pyramidal tissues, and study it microscopically.

Microscopic Observations. In ten of the nineteen cases, a portion of kidney was examined and studied. There were no pronounced changes in three. The pain and tenderness in these three cases of floating kidney must have been caused by something else than inflammation. In five instances the interstitial form of the disease was demonstrated by the microscope, which in these verified the clinical or provisional diagnosis. A glance at the microphotographs prepared for me by Professor Zeit, and which I now pass around, will reveal to you a picture of chronic interstitial nephritis :—the proliferation and hyperplasia of connective tissue, and areas entirely connective tissue, with obliterated or waxy glomeruli prove this. You will also see islands of partially changed kidney tissue, with atrophic tubules, and tubules with desquamated epithelium; flattened epithelial lining in tubules of diminished calibre, and some swelling in the lining of the epithelial cells. Notice the hyaline casts in the tubules, the thickened capsules of glomeruli, and the concentrated layers of connective tissue with many nuclei, etc., etc.

Operation. (a) Superficial oblique incision. Make the skin incision a finger's breadth below the twelfth rib and parallel to it. Cut down to muscular tissue; then dissect the skin and fat from the muscles downwards to the crest of the ilium. (b) Deep vertical incision. Go through the rest of the structures as if to remove the kidney through the lumbar route, along the outer border of the quadratus lumborum. In cutting the lumbar fascia, keep well backwards. (c) Fat. Upon exposing the fat, do not tear and traumatize it, as is so often done, but carefully cut with the knife its thin fibrous covering. Do not insert the hand to pull at the fat, but seize hold of it with many pressure forceps, and deliver it externally. It will now be found that the kidney is immediately beneath your fingers in the wound. (d) Delivering the kidney. Do not use the hand to deliver the kidney. Firm pressure on

the abdomen and traction made on eight or ten forceps applied to the fat, close to the kidney, will easily bring a movable kidney outside the wound. In some few instances, the renal vessels are too short to allow the kidney to be delivered at all. Indeed, it is not necessary to have the kidney dragged out in order to decapsulate it, but if it comes out easily, I do it. When the Kidney is situated rather highly, and the traction on the forceps does not promptly bring it down, I find a long narrow retractor, with a slight concavity outwards, passed beyond the upper pole, greatly facilitates its delivery.

Splitting and Peeling the Capsule off. Incise the capsule longitudinally over the vertex of the kidney for about two-thirds its length, peel it from the cortex with the handle of the knife or finger until it is entirely separated; then slip one end of the kidney through the slit in the capsule, and then the other, and it will be seen that it forms a collar around the hilum of the kidney. If the kidney is movable, I utilize the capsule to suture it in place, and the organ is left in contact with raw muscular tissue, which is more vascular than the fatty capsule, and is, therefore, a more suitable structure to form vascular adhesions with the denuded organ.

Disposal of the Perirenal Fat. Do not remove or tear it to pieces, but gently displace it to the lower end of the kidney. It is but poorly supplied with blood vessels; therefore, as little of the surface of the kidney as possible is left in contact with it, but when placed below the kidney it furnishes an additional support to it.

Puncturing the Kidney. In most of my cases I have freely punctured the cortex of the kidney in many places. This not only furnishes free drainage for inflammatory products, but also insures a thorough determination of blood to the parts, which hastens resolution and favors repair. It must also be remembered that the fibrous tissue formed for the purpose of repair in the absence of pyogenic organisms has a tendency later on to clear away rather than increase in bulk, or subsequently contract and become cicatricial. Of this we see many instances in surgery.

Drainage. Drainage should always be established for five to eight days after decorticating the kidney. My experience leads me to use plain gauze and a small rubber tube for this purpose. It is astonishing the quantity of blood serum and urine that saturates the dressings for a couple of days. Then remove the tube, and afterwards withdraw the gauze as it becomes loose.

Closing the Wound. Use small-sized catgut to coapt the muscles and silkworm gut for the skin, the drainage tube and gauze emerging from

the outer angle of the wound. After applying the dressing, place a firm pad of gauze or cotton on the abdomen below the ribs, whenever nephrorrhaphy has been necessary.

How is a cure Effected. This has not yet been fully worked out. It is my opinion that the excellent immediate results are due to the relief of kidney tension, and that the permanent benefit accrues in the cases demanding it from the establishment of collateral circulation with the diseased cortex. There are many instances of the formation of vascular adhesions in different parts of the body to support this latter fact.

Experiments. Before experiments on animals can throw any light on this subject, we must first produce nephritis in them. In the production of this, all efforts have been unsuccessful. I notice in the Annals of Surgery, April, 1903, Dr. H. A. Johnson writes on "Results of Decapsulation of the Kidney," being work done on dogs. He operated on fifteen dogs; five died in from three hours to three days after the operation. The animals surviving the operation were killed. "Changes were studied two, four and eight days; two, three and four weeks; two and two and a half months." The chief observation in his article is the eighth, viz.: "In no case was there any considerable anastomosis between the renal and perirenal blood channels." It must be observed that in these experiments the kidneys of the dogs were normal, and did not require additional blood channels for physiologic purposes, and also the organs were returned within the fatty capsule, which is but sparsely supplied with blood vessels.

In conclusion, I have no hesitation in affirming that decapsulation of the kidney in acute, subacute and chronic nephritis, both interstitial and parenchymatous, is a practical and effectual surgical procedure. Its limitations are not yet determined. While it can be pointed out that regeneration of kidney tissue is possible, it is folly to claim this procedure to be a panacea for Bright's disease.

10 Drexel Square, Chicago.

It is hoped that the members of the profession will remember the meeting of the Canadian Medical Association, in London, on 25th, 26th, 27th and 28th August. On another page will be found a full announcement of the meeting. Every effort is being made to have this meeting one of the most successful in the history of the Association. The arrangements regarding the programme, entertainments and railways are almost complete.

THE WASHING OUT PLAN.—THE GOOD IT FAILS TO DO, THE HARM IT DOES.

By ALEXANDER HAIG, M.A. and M.D., Oxon, F.R.C.P., London,
Physician to the Metropolitan Hospital and to the Royal Hospital for Children and Women.

IN old times, 20 or 30 years ago, when nothing was known about the introduction of uric acid, when excessive uric acid was thought to be due to faulty metabolism, and when it was believed that all the uric acid that was swallowed was promptly converted into urea, there was little left for the physician to do but to wash out the excess of uric acid by copious libations of water, combined or not with some alkali; and this he has proceeded to do, more or less, ever since, in spite of the fact, which has recently become obvious to not a few, that the plan often fails to do very much good, and sometimes indeed does very much harm. To-day, however, we know that the foundation of this pathology is untrustworthy, that all uric acid disease is practically due to swallowing it, and that the administration of large quantities of water does but little to clear it out, and thus fails in the object for which it is given It has also become evident that in the largest class of uric acid diseases, viz; those of the circulation due to excess of uric acid in the blood (collaemia), it not only fails to do the good expected of it, but very often indeed does actually produce infinite harm, even death itself.

And, first, as to its failure to do good.—In my book, "*Uric Acid*", edition 6, page 194, I give notes of an instance in which in a morning hour the excretion of urine was only 53 c. c. per hour, and then a dose of opium taken without fluid ran it up in the next hour to 234 c. c. Here there was obviously plenty of water in the blood, but it was unable to get out till the opium cleared the blood of uric acid, so freeing the renal capillaries and allowing the water to pass. Obviously then, the uric acid in the blood controlled and kept back the water; the water in the blood did not control the uric acid. If a pint of water had been administered that morning before the opium would it have increased the excretion of water? Probably hardly at all, for there was a large amount of uric acid in the blood and it was obviously blocking the renal capillaries and keeping all the water in, and the water was scanty before the opium, not from want of fluid in the body and blood, but from blocking of capillaries by uric acid.

But there is one way in which excess of water may increase the excretion of uric acid, and that is by producing dyspepsia; for dyspepsia diminishes the digestion and absorption of food, and so diminishes the formation of urea and of acid products, and this produces increased

alkalinity of the blood and so increased solution of uric acid, and, for a time, increased excretion of uric acid. Probably, at least, one portion of the dyspepsia, produced by the excess of water, is due to its diluting all the digestive fluids and rendering them less active solvents of the food substances submitted to their action. Thus, we may say, to complete this part of the subject, that the uric acid in the blood controls the excretion of water, and that the addition of water to the blood does not control or increase the excretion of uric acid, but that to a certain extent, by diluting the digestive fluids and producing dyspepsia, the continued administration of excess of water does, to a small extent, increase the excretion of uric acid. It is now, however, quite unnecessary to give excess of water at all, for all uric acid disease is prevented by stopping the introduction of uric acid. A person who forms 10 grains of uric acid a day and swallows other 10 grains in his food, will have 20 grains of uric acid to deal with each day, and may suffer more or less severely from uric acid disease; but, if he will take the trouble to shut out the unnecessary 10 grains which he swallows with his food, he will gradually draw clear from excessive uric acid; he will have to deal each day only with 10 grains of the substance, and he will cease to suffer from the severe diseases which its excess in the blood and tissues produces.

But the practice of washing out with excess of fluids, which is due to an antiquated physiology, is still carried on, and it is therefore necessary to show up the harm which it only too often does. In arthritis, due to uric acid, it produces dyspepsia, dyspepsia increases the solvent powers of the blood for uric acid, and so the uric acid is dissolved out of the joints, and collaemia, anæmia and debility may take the place of the arthritis. The patient is cured of one form of uric acid disease only to suffer, and perhaps, to suffer very severely, indeed, from another form which is, perhaps, worse than the original. That he may get clear of his gout, is true, but this may be replaced by anæmia, high blood pressure, with all its intracranial results, with mental depression and other troubles, and the danger of cerebral hæmorrhage, or, before long, he may find himself suffering also from Bright's disease, dilated heart and dropsy. But the worst effect of this washing-out plan is seen in the far more numerous diseases which uric acid produces, through its effects on the circulation, those diseases which I have called the collaemic group, of which Bright's disease is the worst type. The worst possible thing to happen in all collaemic disease and that which makes the prognosis in Bright's disease almost absolutely hopeless, is heart failure, for Bright's disease may be defined as collaemia producing defective circulation, the defective circulation being doubled, trebled and quadrupled by

subsequent failure of the heart. Collaemia itself means defective combustion, but that defective combustion is far more than doubled if the heart fails as well. Now, when the heart is fighting against capillaries obstructed by uric acid, when it has as much as it can do to keep up the circulation from day to day against these obstructed capillaries, it is obvious that a comparatively small matter may turn the scale against it and lead to its dilatation and complete failure. Now, this is exactly what excess of fluid does—it produces, as we have seen, dyspepsia, and dyspepsia produces defective nutrition, defective nutrition not only throughout the body, but of the most important muscle of all, that of the heart; and then we must not forget that a pint of fluid weighs a pound and a quarter, and that each pint of fluid more in the blood is 1¼ lbs. more for the heart to drive. In this way excess of fluid does infinite harm—it dilates the stomach and causes incurable dyspepsia, dyspepsia causes debility, and the fluid does also increase, to a very large extent, the work that the heart has to do. No wonder the heart fails and dilates; no wonder it ultimately becomes like the bulged outer casing of a bicycle tire, absolutely beyond repair.

Now, in recent years, I have seen quite a number of cases, of which I could give notes did space permit, who have gone through this treatment of washing out and have survived by accident as mere helpless wrecks with hearts which have been stretched beyond endurance and which will never again be fit for good work, lives which are crippled and which must live, if they live at all, on mere sufferance and as invalids. Some of these cases have told me that they were forced to drink pint after pint of water in spite of an absolute distaste and loathing for fluid, (see Uric Acid, Ed. vi., p. 30), for in this case nature says no with all the force at her command. They do not want water as there is already excess of water in the blood and tissue fluids, but the patients are forced to drink and manage to get down several pints a day in spite of nature's protests and in excess of her requirements. Gradually, between dyspepsia on the one hand, and excess of fluid to drive and excessive obstruction of the capillaries on the other, the heart fails, and dilates, and gives up the struggle, and one day the patients take to fainting severely, or become more or less dropsical, and the worst that can possibly be done for these patients has been accomplished.

Perhaps in the great and extensive employment of water, in the present day of treatments for dilatation and failure of the heart, quite a large number of these cases are probably due to the absolutely unphysiological idea that uric acid can be washed out. It were nearer the truth to say that the patient can be washed out, and is not unfrequently

washed out, but the uric acid remains, and, more insane of all, those people who go in for washing out do also introduce each day in the food quite as many grains of uric acid as they could hope to wash out, if the process did act as it is supposed to, by those who have trusted to their imagination and not looked to see what the physiology of the body really does.

If the pericardium is very strong and refuses to give way then the excess of fluid produces very high blood pressure with headache, mental depression, epistaxis, perhaps cerebral hemorrhage, but in any case the treatment is both painful and dangerous and I have shown that it is useless and unnecessary.

The opposite side of the picture is, I think, to be seen in the enormous amount of good which can be accomplished in many cases of collaemia and Bright's disease by cutting off all fluids, by putting the patient on a pint, or even half a pint of fluid in the 24 hours, or even on an absolutely dry diet of bread and fruit, the small amount of fluid in the fresh fruit being all that is taken for days together. The way in which the heart will sometimes recover under these conditions, when not hopelessly damaged, and with the recovery of the heart the way in which the defective combustion which we call Bright's disease will gradually pass away, is an object lesson which many to-day should witness to show them how extremely silly and unphysiological is the opposite plan of treatment, the attempt to wash out the uric acid from the body in excess of fluid, when the uric acid, as a matter of fact, controls absolutely all output of fluid from the body, and the absolutely insane attempt to cure uric acid disease by sweeping it out with one hand, while pouring it in with the other. In this and all cases of uric acid disease there is no necessity to run such terrible risks, for the uric acid excretion can, in most cases, be reduced to at least one half by cutting off introduction, and if this is done it may be unnecessary to do anything at all to increase its excretion. A somewhat low and dry diet of bread and fruit with, or without, a little alkali, will do easily and safely all that is required.

Dr. Graham has been studying an epidemic of dengue which began at Beyrouth in 1901. He found that the houses contained large numbers of culicidae, and that by removing all the mosquitoes from a house the disease did not spread. He then put some persons under a net with insects from dengue patients, and also took them to a village 3,000 feet high and shut them up with persons, producing the disease.

RATIONAL vs. EMPIRICAL THERAPEUTICS.*

By J. O. TODD, M.D.
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THERAPEUTICS is defined to be the branch of our art that deals with the "application and the modes of operation of the remedies for disease." In the broad acceptation of the term then all remedies, whether medical, surgical or prophylactic, should be included; and it is in its broader significance that I ask you to receive what I have to say to-night. While it is apparent that therapeutics as a distinct subject is taught in our colleges from a medical standpoint alone, it ought not to be overlooked that there is an ever-increasing growth of modes of surgical treatment and it might be well argued, I think, that great benefit would come if as thorough an investigation into "composition, the application and the modes of operation" of surgical measures were instituted as is done in the case of medical remedies. The Burke's Peerage of medicinal therapeutics is our great national register—*The Pharmacopœia*—and rigorous are the tests and great the deeds before a drug receives the signal honour of a place therein. A wise council sits in judgment over the medicinal applicant and weighty must be its merits and well-tried by time before it may place behind its name the symbols B. P. officinal. It were well, perhaps, if a surgical pharmacopœia, officially controlled, were in existence to give dignity and stability to some of our surgical procedures.

I think it can be taken for granted that the object you gentlemen have in devoting so many hours and so much energy to work within college and hospital walls is to learn how to overcome disease. In the constellation of your studies each educational star helps to spell out the word therapeutics. This great aim of our art is no more prominent, I take it, in these than it was in the early days of the practice of medicine; but while our Aesculapic and Hippocratic progenitors were probably as earnest in their desire to relieve suffering as we are, they labored in an educational atmosphere of mysticism, and hence their practice was weakened and progress limited. Today our knowledge has in its certain possession the principles which underlay many of the phenomena observed by them; hence we are in a position to rationally direct many old therapeutic agents and, better than all, to deduce remedial means from known causes of disease. Where science and rationalism hold sway to-day empiricism formerly had its power. It is a dire admission to make but truth compels it, that scientific medicine is a growth of very recent years. It seems inexplicable that an art which is as old as antiquity and

*Read before Students' Association of Manitoba Medical College.

whose existence meant the alleviation of suffering humanity should yet have lain dormant for so many centuries. The Old Testament refers to the physicians, and poor old King Asa appears to have had rather curt handling from them, if we can infer anything from the quaint sarcasm of these words : " in his disease he sought not to the Lord but to the physicians—and Asa slept with the fathers."

Hippocrates, before Christ, and Galen after, did much to hold together the better elements of medicine, but no amount of accurate description of the appearance and symptoms of disease could counterbalance the paralyzing influence of their theories to account for it. Health, according to Hippocratic teaching, was the result of the due combination of the four humors of the body, viz.: blood, phlegm, yellow bile and black bile ; disease was the consequence of a disturbance of these. Galen, 200 A.D., popularized the moon as the greatest agent in the causation of disease, and he also encouraged the use of amulets. Yet these men were the leaders of what was called the Rationalistic School of Medicine, which has, at any rate, held together the best traditions of our art and which merits our gratitude, inasmuch as it preserved for our subsequent selection remedies of undoubted value if of such empirical origin. The clinical observation of disease, chemistry, anatomy, physiology, pathology and bacteriology are the lights that, one by one, have illumined the gloom of such therapeutic darkness and are showing us the way from the humours and vapours of empiricism to the surer ground of rational treatment. These lights have not always burned as they do to-day—no—the great draft of superstition kept them flickering. For centuries anatomy shed its feeble beams in caves and secret places only—physiology burned as a separate flame only when the touch of a Haller and a Harvey came to separate it from the mother-light. Chemistry, older than all and more developed was yet shrouded in superstitious mist and its energies directed into useless channels thereby. The century that has just glided away from us saw the first glimmer of physiology, pathology and bacteriology. Is it any wonder then and can it be fairly charged as a reproach that there still lingers in our therapeutics the influence of an empiricism that has the weight of ages with it ? I use the word empiricism in its truest and most honorable sense and not in the degraded one of common acceptance. Hippocrates, Galen, Paulus Aegina were empirics but they were never quacks. They at least had the merit of being convinced that they were right, and in support of this let me quote to you the dedication of a book on surgery to the King of France by the justly celebrated reformer of certain surgical therapeutic horrors such as the pouring of boiling oil on a fresh bleeding surface, or as the

scorching of newly-made wounds by red-hot irons heated on the spot and applied with none too gentle a touch. He writes, "God is my witness and men are not ignorant of it, that I have laboured more than forty years to throw light on the art of surgery and bring it to perfection, and in this labour I have striven so hard to attain my end that the ancients have naught wherein to excel us save the discovery of first principles," (only fancy the theories of Hippocrates and Galen accepted as first principles) he continues "posterity will not be able to surpass us, be it said without malice or offence, save by some additions such as are easily made to things already discovered." These words were written by Ambroise Paré, the great French surgeon, towards the end of the 16th century.

Early medical empiricism taught that remedies which had been tried in certain diseased conditions and found beneficial should be used again in all such conditions without any further inquiry being necessary into their mode of action. A brilliant therapeutist has been credited with the following description of the origin of this method. When Adam was sick, Eve, for undoubtedly the first physician was a woman, administered to him some preparation made from an herb, plant or shrub. If Adam recovered from his illness the data was dotted down in the old lady's memory and when Adam was sick again and presented the same symptoms she gave the same remedy. The fact that Adam recovered was sufficient proof to her of the efficiency of her treatment. The suggestion that he might have recovered from his illness despite her medicines, or that her drugs had no effect on him either way never entered into her decision of the case. Seeing the symptoms, giving the remedy and getting the relief was the natural method of primitive therapeutical study; thus there grew up in every community a system of empiricism, or treatment based on experience, which as seen to-day could be wholly and radically wrong. Satisfactory as such theory and practice, based on experience without experimental proof, might be to many minds, it was not sufficient for the philosophic mind of man ever looking out for some great law governing the phenomena observed. Hence we find school after school founded, each having its own specific law. There were the Hippocratic, or Dogmatic, School and the School of Galen which we have instanced. The Arabians brought chemistry to such eminence that it was invoked as an explanation of the occurrence of disease and Paracelsus gained a temporary fame as its exponent. There was the school founded on what was called the law of signatures, whose teaching was that a drug should be given that resembled in appearance the organ which was supposed to be diseased. For example in liver disease, there should be given aloes, from its fancied resemblance to this organ. Through coincidence aloes did do good, occasionally, by its pur-

gative action, and on such deceptive data as this a great school of the middle ages held sway. In such fashion have arisen, one by one, the Perkin's Tractors in America, which had the power, at any rate, to draw the people's money into coffers of its originators, if it still left them with their disorganized kidneys or other internals. In England Bishop Berkely's Tar-water panacea took the early part of the century by storm, and last but not least the law of *similia similibus curantur*, the very, very own especial production of the brain of Samuel Hahnemann. Let us consider briefly the condition of medicine up to the time of Hahnemann and we can readily see how such a law and practice, which had in it, at any rate, the elements of simplicity in treatment, could gain the ground it did, while at the same time we shall review the forces that were at work laying the foundation for a scientific medicine.

Previous to the first quarter of the century which we have but the other day farewelled, the treatment of disease was based on one or the other of the so-called laws that we have pointed to and which were established on the most irregularly collected data. Empiricism influenced all the schools. Hippocrates and Galen, whose influence had been to check rather than to advance investigation for hundreds of years, were given the first great blows, that augured badly for their continued domination of medical practice, by Paré and Harvey, in the later 16th and early 17th centuries. Paré reformed the treatment but did not attack the dogma of the Fathers of Medicine. As he has expressed it in his own quaint dedication already quoted, "the ancients have naught wherein to excel us save the discovery of first principles." William Harvey demonstrated to mankind the circulation of the blood, at the same time laying the foundations for that experimental science which now has our art powerfully in its control. It can be said with truth that from the time of Hippocrates, four hundred years before Christ, to Galen, two hundred years after Christ, no advance was made in medicine except that as an art it had spread throughout the world. As an instance of the tremendous hold these fathers had over the medical world let me give you the following: "The records of the London College of Physicians affords a striking illustration of this fact (viz. the infallibility of Galen) in so far as England is concerned. In 1559, Dr. Gaynes was cited before the college for impugning the infallibility of Galen. On his acknowledgment of his error and humble recantation signed with his own hand he was received into the college." The 9th to the 15th centuries felt the influence of Arabian teaching and chemistry became a feature and the law of the Paracelsian school. The 17th century felt the influence of our own great Sydenham, who lived to

reform the disgusting modes of treatment then in vogue. Only think that up to this time kings and potentates, as well as swine herds, were treated to some one or other of the following therapeutic delicacies:

"The urine of a lizard."

"The dung of an elephant."

"The liver of a mole."

"The excrement of rats beaten to a powder."

"Blood drawn from the left wing of a white pigeon."

Is it any wonder a Montaigne arose to wither with his biting sarcasm a science that dealt in such simples as these.

Boerhaave, the Leyden physician, dominated the 18th century, and when I quote you his posthumous advice to the world, you will realize how slight was the force of therapeutics in his time. This great man, whose will had caused his learning to permeate the intellectual world of his day, died leaving a handsomely embellished volume in which, he said, would be found all of the real medical knowledge of the world and all of the valuable precepts of medical teaching. When the book was opened it was found that it consisted almost entirely of blank pages. Only one page contained any statement and on it was written "Keep your feet warm, your head cool and your bowels open." Again, gentlemen, compare this amazing statement with Paré's dedication to King Henri II. and we can see what enlightenment was doing. Both of these men had labored industriously to benefit mankind; both saw the evil of sham and directed their keenest weapons of satire against it; both reformed treatment; but Boerhaave dies acknowledging that nothing is known and all has to be discovered, while Paré, two hundred years before him, dies boasting that all is known and there is nothing to be discovered.

About every fifty years, from the sixteenth century on, has seen the advent of some clear-headed brain. In the early sixteenth Ambroise Paré clarified the cruel therapeutics of the battlefield, and Harvey showed what results could be obtained by scientific investigation into the phenomena of our bodies. In the seventeenth Sydenham did for the civilian bedside what Paré had done for the military. The early eighteenth felt Boerhaave's power and saw the experimental methods so beautifully begun by Harvey continued and expanded into other fields by Haller, who has been called the "father of physiology"; and felt the vivifying force of that "man of science and surgeon" John Hunter, with whom, your permission being granted, we shall dwell a little. The stamp of John Hunter upon medical progress is, perhaps, the most indelible of the many that are found thereon; for he not only saw what Sydenham and

Boerhaave did, but he boldly outlined a course of action that was calculated to better things. His was the clearness of head and stoutness of heart that could mark his own work and teaching with a motto that in those days of reverence for authority was almost sacrilegious. "Don't think," he tersely tells the students who came to his original and forceful clinics, but "try; be patient; be accurate." What John Hunter meant when he said "don't think" was that too much time had been given for ages to mere theorizing—to thinking on principles that had never been proven to be true. Hippocrates and Galen thought but did not sufficiently "try." Let me give an anecdote of this original man that will disclose at once his straightforwardness and the uncertain state of the therapeutics of his day. The case is tetanus and he says, "I attended another case to-day with Sir N. Thomas; assafœtida and opium were given without effect; these were left off and bark employed in large quantities. Dr. Warren, being called in, advised, among other things, a bath prepared of milk and water. The patient died soon after. I discovered to my amazement the different methods of different physicians; for Sir N. Thomas had read much and knew all the antispasmodics from Hippocrates down. Dr. Warren, having just cured his son of lock-jaw, implicitly followed the same practice in this case, being unable to alter his rules of practice in the smallest degree as occasion might require." Certainly Hunter was not thus straitened in his treatment, as the succeeding anecdote will show. The case is one of a carbuncle, and he says, "As neither bark nor calomel nor opium had been of any use, I said to Dr. David Pitcairn, 'Now do not let us permit this patient to be lost while we are only using such means as experience shows to be of little or no effect; for, David, this is a case belonging more to my province than yours, and I, being an older man, have seen more of them than you have, and can tell you what, perhaps, you did not know, that we have no powers in this case that are known. Now, David is a truly sensible man and not governed by form; he therefore agreed, but wanted to know where we were to begin. 'Why,' I said, 'with the first letter of the alphabet and go through the catalogue of the materia medica, so as we do not stop too long on the letter B (bark) as is generally done.'" From John Hunter we obtain one of the most brilliant bits of surgical therapeutics ever originated, viz., the distal application of the ligature in aneurism. This has been called one of the "best deductions ever made in surgical practice," for in it he "united a whole multitude of facts from anatomy, physiology, clinical experience, post-mortem examinations and experiments on animals." The dissatisfaction, given expression to in the last anecdote of Hunter, of many physicians with the results obtained

from the use of the stock-in-trade remedies of the day, viz., bleeding, bark, calomel and opium, led to an extreme of polypharmacy that raged in the eighteenth and nineteenth centuries. I could show you on the files of one of our city drug stores a prescription having twenty-three different ingredients. I helped to compound it. Truly this is a shot-gun order of old time therapeutics. So that, gentlemen, considered from what standpoint you will, whether from our own ranks or from outsiders, we gather that the beginning of last century, when Hahnemahn established his theory, found our therapeutics in a decidedly shifty state. It had neither the confidence of our leaders nor did it inspire trust outside the ranks, as a knowledge of the literature of the time with its pictures of the shaky healers of the day fully shows. The following from a French epigrammatist hits off the position tersely.

> "Nature and sickness fight—a man the prize;
> If nature wins, he lives; if sickness, dies;
> Blind men (called doctors) come the fray to part
> With random strokes of weapons forged by art,
> If, chance, they hit the foe, the day's their own;
> If nature gets the hurt the patient's gone."

Sir Walter Scott is the authority for the following: At an English village, while travelling, his servant took ill. Of the two doctors in the place, one had but recently arrived and for him he sent post-haste. To his utter astonishment he recognized a Scottish blacksmith who had formerly carried on his trade in a village well known to Scott. "Can it be possible that this is John Lundie," says Sir Walter. "In truth it is, your honor; just a' that's for him."

"Well, let us hear, you were a horse-doctor before, but now it seems you are a man-doctor. How do you get on?"

"On? Just axtrordinaar weel, for your honour maun ken that my practice is vera sure and orthodox, I depend entirely on twa' simples; just laudamy and calamy." "Simples with a vengeance," replied Sir Walter, "but, John, do you never happen to kill any of your patients?" "Kill oh! aye, may be sae, whiles they dee and whiles nae; but its the Will o' Providence, onyhoo, your honor, it will be lang before it makes up for Flodden."

But through all the darkness light was forging which foreshadowed the establisment of a radical therapeutics. Jenner's steady intellect received the germ that, eventually, after passing through stages of experimentation based on the observation of the freedom of the Gloucestershire dairy-people from smallpox, matured into that now world-accepted triumph of prophylactic therapeutics—vaccination.

William Stokes, the great Irish physician, lived to broaden our methods of physical diagnosis; to discriminate the diseases of heart and lungs, and thus to give greater precision to our therapeutic aim. Graves left as the legacy of this life-work the history of that disease of the thyroid gland with which his name, as its discoverer, must forever be connected. Sir Benj. Brodie's careful observation on joints established conclusively their great variety and the distinct existence of white-swelling as a separate disease needing special treatment. Addison discovered the disease of the supra-renal capsule and gave it an exhaustive description. Typhus and typhoid fever were separated from their deadly embrace and not treated as formerly, side by side. Bright did for diseases of the kidneys what Brodie had done for diseases of joints, established the identity of the various phenomena that had been carelessly mixed before under a common head. Sir James Y. Simpson gave to the world that agent which has revolutionized surgical methods and relieved so much suffering—chloroform. Pasteur's patient researches into the processes of fermentation fell into the expansive power of Lord Lister and we have to-day antisepsis and all the blessings attendant on its use.

Koch, in a series of demonstrations, proved to the world the identity of the various types of tuberculosis. Each of these discoveries has swept away some cobweb theory and established a basis for rational treatment, so that we are in a position to-day to attack, in an ever increasing number, the known causes of disease. We do not, it is true, possess in each disease its great specific, but in a considerable number we have got a specific. We give the Bark still in malaria, as our predecessors did, but we do so now knowing why—knowing from actual observation under the microscope that quinine has the power of killing the plasmodium in the blood. Opium we still give, but with ever less and less frequency and greater discrimination. It is not now a specific, but an aid like chloroform, and when used judiciously is a blessing to mankind. Bleeding is now employed to meet certain well-defined indications, and once again we know that it is not a specific but an adjuvant to other measures Calomel, the last of the ancient four-in-hand,—bleeding, bark, calamy and laudamy,—is still largely an empirical agent of great value, it is true, but of somewhat undefined action. As Montaigne has said, "I experimentally know that radishes are windy and senna leaves purging;" so we know that calomel acts.

If you take your therapeutic manual and go over its lists, you will find a fairly lengthy one containing agents whose use is based upon a truly rational foundation; whose use is guided by having a definite object to

attack in a known microbic cause of the disease; which are used because a deductive process shows their place in rational treatment and because standards of experimental necessities have been satisfied. This growing list includes remedies for diphtheria, tetanus, septicaemia, myxoedema, bubonic plague and others which seem to be on the verge of being added, such as typhoid fever and tuberculosis. Unquestionably empiricism has still a firm hold on our therapeutics, for it must be admitted that medicine has much to gain before it can be classed amongst the exact sciences; and it seems to me, we owe to empiricism a debt of gratitude for having preserved for our use many valuable remedies. Quinine has been already mentioned. Iron has been taken from the hands of the empirics and placed on the rational side; for it can be demonstrated absolutely by daily examinations and tests of the blood, that there is an accession of the iron which we administer to the corpuscle depleted, by disease, of that ingredient. Mercury has by empirical use so established itself as a specific for syphilis that this drug alone should gain our thanks forever to any system that discovered it and encouraged its administration. To-day we can say that we have tried all these drugs and now hold fast only those which are true, while we make diligent search for causes, ever causes, to illumine with reason their use.

Thus, one by one have many of the talons of the great octopus, superstition, been raised, and with the sundering of each from its connections, there has sprung up a healthy growth of some branch of science. To-day these are flourishing and medicine has been rejuvenated by an injection of the elixir of modern progress to such point that her tottering bones and paralyzed forces are now erect and active. We treat disease, to-day, not upon some brain-befogged theory evolved in secret places, but upon some experimentally proven principle. We do not inject the antitoxines of tetanus, or diphtheria, because a Roux or a Kitasato tells us to do so, but because, if we take the trouble, we can not only see but do for ourselves the work that demonstrates to our reason the facts established by their investigations. Do you want to see what a toxine can do? Then take a drop of typoid diluted blood and treat it under the microscopic lens with some healthy bacilli of Eberth, taken fresh and well fed from a bouillon culture. In a space of time, varying from a few minutes to hours, those active, wriggling bacilli have received their quietus and, like plague stricken dead, are piled up in lifeless clumps, destroyed, curiously enough, by a sort of retributive justice, in substances of their own orginating. With such a satisfactory showing of results accomplished within the space of half a century, we are justified in looking forward to a much more rapid progress in the future; for our vision, already

widened by the application of physical laws to the human body in the use of such aids as the stethescope of Laennec and the microscope, can confidently hope to see through still darkened tracks of our bodies by the aid of the fluoroscope and skiagraphic tracing. The possibilities of the microscope are not yet restricted, as is evidenced by the growth of the new pathology, the study of the blood in disease, haematology. In the careful observation of the blood in health and disease we have a new avenue through which the vista of enlarged powers of treatment is seen. Leucocytosis, local and general, has received practical application and obscure pus collection in the body, can be diagnosed with considerable certainty. Central pneumonia, a condition frequently undiagnosed on account of absence of the standard physical signs, can be inferred by its aid. With then, gentlemen, the nature of the causes of disease becoming steadily clearer; with truer classifications of disease; with aids to diagnosis constantly being added to our clinical machinery; with truer knowledge of the action of remedies within our bodies, we can claim a not distant time when science will not renounce us and when we will be received with honor amongst the family from all sections of which we receive so much help.

THE MEDICAL WITNESS UNDER EXAMINATION.

By W. R. RIDDELL, B.A., B.Sc., LL.B., F.B.S. Edin., K.C.
Legal Lecturer in Medical Jurisprudence in the University of Toronto.*

MR. Chairman and members of the Medical Profession, you will allow me to say in the first place that I decline to look upon myself as an entire stranger in a gathering of medical men and women. True it is, I do not have the honour of being a doctor of medicine, nor do I practice medicine (for which I duly offer up thanksgiving every day of my life), but I had the good fortune during my earlier years to study medicine for a short time in the same office as my friend, Dr. Powell; and that has given me an interest in medical subjects and in medical men which I have never lost, and which I trust I never shall lose.

The very interesting paper of Dr. MacKenzie, and the still more interesting discussion which followed, struck me, as I sat on the platform, as furnishing a strong illustration of what Herbert Spencer and the evolutionists call differentiation, and the advance and evolution from the homogeneous to the heterogeneous. Now, when I studied medicine there was no difficulty about diphtheria as there is now. The diagnosis, the treatment, the prognosis were perfectly simple. If the neighbors'

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children had had a sore throat and died and my child had a sore throat then it was diphtheria. If they had not died of sore throat, then it was not diphtheria. The treatment, too, was perfectly simple. Once the case was diagnosed as diphtheria—take a stick about six inches long, with a piece of cotton rag, more or less clean, (they had no antiseptic or aseptic methods in those days) tied around one end of the stick, and make it tight with tread—No. 30 preferred—dip that into a solution of nitrate of silver and swab out the throat. That was the treatment and the only treatment. Prognosis, too, was certain. Repeat that treatment. If the child gets better it probably will not die. If it takes a turn for the worse and dies, then the case is hopeless. (Laughter). There was no cultures in those days. They had beef tea, indeed, but it was used for feeding the patient not the bacteria. They had nothing in the way of incubators and the like that you put into your waistcoat pockets or into the axilla of the patient in order to develop bacteria. There was then no difference of opinion as to the diagnosis, treatment, prognosis. Now I see no two medical men seem able to agree, except on this point: "If you get a really costly medicine, such as antitoxine, the more of it you administer the better the result."

Like my friend, Dr. MacKenzie, when I was asked to read a paper before this Association I had some little difficulty in coming to a conclusion as to what kind of paper would probably answer your requirements best. As, however, I had already, at the request of the Medical Faculty of the University of Toronto, prepared a series of lectures for the medical students upon the subject of "Medical Men in Court," I thought it might not be out of place to take part of one of these lectures, change it somewhat and adapt it to the "meaner capacity," as the Shorter Catechism has it, and give you that. That will account for the didactic tone which I propose to use. You will please consider yourselves students who are sitting at the feet of Gamaliel and learning from him.

In the English language, the adjective has three degrees of comparison: the positive, the comparative, and the superlative. The noun substantantive, with the exception of a very few words, has nothing of the kind. One of these exceptions is the useful and expressive word "liar." There are three kinds of liars. There is the liar, the d—d liar and the expert witness. Now that gibe, that proverb, derived most of its vogue from the medical witness. And there is a modicum of truth concealed in it, although, when one considers what it means, and what it implies, and considers what a medical witness as a rule is, it will be found to be grossly extravagant and grossly unjust.

There are two kinds of witnesses: the common witness, who speaks as a matter of fact; and the expert witness, who speaks as to a matter of opinion; and when we remember that an expert witness is only such when he is speaking as to a matter of opinion, and that in the case of opinions there always have been and always will be differences, it is not at all wonderful that expert witnesses do not agree in their testimony.

Concerning opinions, there is constant disputing; and it is not doctors alone who are constantly disputing. Take the clergy: the *odium theologicum* is worse than the *odium medicum* and the *odium forensicum*, and both of these, God knows, are bad enough. The clergy of one church believe that the theology of another church is based upon error, and they know that the opinions of the clergy of that other church are wrong. Members of my church know that they are right and the other fellows are all wrong. Orthodoxy is my doxy, heterodoxy is your doxy. Lawyers don't agree, even when they are put on the Bench; and occasionally a lawyer is put on the Bench. It is not always the case, but still those who are lawyers are put there. I have in my mind more than one case of pure law, not matters of fact at all, but matters of opinion, where one court has given a verdict for the plaintiff. This has been reversed by the next court, that again reversed; and then in the Supreme Court this last was again reversed. The only reason perhaps this was not reversed again was because there was no other court to go to. Politicians do not agree in their opinions. Over there in the adjoining park, in the Legislative Assembly, this afternoon they will be discussing a matter of opinion, and if you will give me a list of the people who are going to vote, if you tell me their names, I will tell you the majority on one side or the other. Opinions must necessarily differ, and therefore it is that the expert witness, who is called upon to swear, not to a matter of fact at all, but to a matter of opinion, almost as a matter of course differs from another expert witness.

Now, you will say that I am travelling very wide from my subject, but that is really not so, as I hope to be able to show you in a few minutes. What is the object of a court? What is the witness in the box for? What are courts of justice kept up for? They are kept up for determining facts in the first place, and then applying the law to these facts so found? The judge applies the law, the facts are found by a jury, or by a judge sitting instead of a jury; and I shall, for convenience, use the word "jury" instead of a judge sitting for a jury. The facts so to be found by the jury are not to be found by them from their own knowledge. In the jury box, as everywhere else, one is entitled to use common knowledge, that is, what everybody is supposed to know.

Everybody is supposed to know that we have night and day, there are seven days in the week, that water is wet and fire will burn, and that when medical men get together at dinner they have a good time. I won't say anything further on the latter matter, lest it might lead to painful misapprehensions. A juryman, or a judge, has no right to found a verdict upon his own knowledge of facts. He determines the facts upon the evidence given in the witness box by a number of witnesses; and, therefore, it is that the witness is probably the most important man in the court of justice after all, although you will find difficulty in convincing the unhappy litigant of that.

What is the object of cross-examination? It is to determine two things. The object ultimately is the truth, and that is determined in two ways: finding out, first of all, how near the witness is trying to tell the truth; and, secondly, how far he is worthy of belief even if he is trying to tell the truth. Now, both of these two matters must be considered. A man may be perfectly truthful, telling what he believes to be the exact truth, and by reason of his want of capacity, or by reason of some idiosyncrasy, which can only be determined by careful investigation, he is not succeeding in telling the truth.

Again, the value of the evidence of a witness depends upon a number of things. In the first place, it depends upon the opportunity which the witness has had to investigate the matters, concerning which he is giving evidence. This is the case with the common witness as well as the expert witness. I have heard medical men swear (I have never heard medical men say it outside of the witness box) that a man who has examined a patient once will have as good an idea of the extent of his injuries, and the probabilities of his making a complete recovery, as the man who has been with him from the time the injury took place, who has waited upon him, prescribed for him over and over again, who has joyed over him when he showed signs of recovery, and whose heart has gone down as his patient's health has gone down. However that may be, the means of observation which a witness has is the first thing of importance.

The second thing is his capacity to observe, his capacity to form an opinion, his capacity to understand what he sees. That is a matter largely of education and of experience.

Again, the value of the testimony depends upon a man's memory. How accurate is a person? How retentive is his memory? Does he remember what he thinks he remembers? Is it the fact that he is telling the truth concerning something that has taken place in the past?

Another thing is his capacity to say what he means. You may think that is an extraordinary statement. It is not. Any man who has

been much in a court of justice will agree with me in this. Not one man in twenty appreciates the value of an accurate use of the English language. Not one man in twenty can express exactly what he means, so that there cannot be any mistake about what he does mean. The capacity to express one's thoughts, the ability to put in words and in decent English what it is desired to convey, is another thing upon which the value of a witness' testimony depends.

Another thing is his honesty. Medical witnesses are generally honest. The medical man who will allow himself to be approached and who will give evidence contrary to fact, or contrary to his real opinion, for the purpose of enabling the plaintiff to get a larger verdict out of a railway company, is as much a thief, is as much a criminal, and should be behind the bars just as truly as a man who opens a bank with dynamite.

Now, the object of cross-examination is to determine how far the man's testimony is to be relied upon, how far what he is stating is the actual fact.

I remember once defending a man and woman for murder. A very graphic description was given by a young girl, about 13 or 14 years of age, of a whole series of circumstances, which she detailed so well and vividly that one could see that they would lead to an irresistable conclusion, that the man and woman in the dock were guilty of murder. I cross-examined at some length and with some care. Her story wavered. Each time we approached the story from a different point of view it changed. One little circumstance was modified, and little contradictions began to appear. By a little careful leading, or perhaps by a good deal of careful leading, she began contradicting her story in important points. Before the cross-examination was through she had contradicted the whole story, and that, not by inadvertence, but of intention. She had yielded to the suggestion of the stronger mind. She had been living for three months in the home of a well-known enemy of the prisoners. The judge discharged the prisoners and would not allow the matter to go to the jury. I was asked by a clergymen ten minutes after the acquittal, "How could you get that girl to lie the way she did? Did you think it was honest, or right, to ask her those questions?" I answered, "Yes, eternally so." He said, "You knew she was telling what was not true?" "Yes, but I wanted that jury to see that that girl had a mind of such a character as to yield to the suggestion of a stronger mind. That she would allow to be instilled into her brain thoughts which had never been there, and thoughts which ought not to be there, thus showing that she was easily influenced." Then taking the fact that she had been in the house of a

well-known enemy of the accused for two or three months, the danger of allowing such evidence to procure a conviction was obvious.

I say cross-examination is one of the most valuable weapons for arriving at the truth, and I speak of it because there is, at the present time, a feeling in some quarters against cross-examination. Take some of those very papers that are now crying out against cross-examination, and let anybody charge them with libel, let that person be put into the witness box in order to give evidence against them, and they will be the very first to say, "It is the duty of a council to test in every possible way how far the witness is trying to tell the truth, and how far the witness is succeeding in telling the truth." Of course this will lead to inquiry into matters apparently irrelevant, but all proper cross-examination is directed to the sifting of opportunity, capacity, honesty.

Now, a witness has two duties. I suppose that probably will be news to you. I do not think you will find this in any of the books on medical jurisprudence. I don't think you will find it in any book of any kind; but I am not a man of theory. I am a man of practice. My profession calls upon me and I am employed to get verdicts, if I can That is my life work and I propose to get verdicts by every honorable means, and I don't care one rap for theory. Your books tell you the witness has got only one duty, that is, to stand up there and tell the truth. That is grossly wrong. I have heard witnesses tell the truth in the witness box and nobody believed them. A witness has more than one duty. In addition to actually telling the truth, a witness owes it to himself, and to his position, to tell the truth in such a way that the jury and spectators will believe him. Your text books will tell you, "Go into the witness box and answer the questions truly, and then leave the witness box secure in the approval of your own conscience." I say, however, that not only should a witness tell the truth, but he should tell the truth in such a way that people will believe him, and that, after all, is the main object of a witness—to say something which will be believed and have an effect on the verdict.

Now, that leads me a little further. A witness box is no place for frivolity. The witness box is no place for jesting or trifling. The man who has taken an oath to tell the truth is under a serious obligation, and that obligation he ought to have in his mind before he goes into the witness box. These are commonplaces, perhaps, to you, but none the less they are exceedingly important. If a man is going to be a witness, it is his duty to prepare himself by finding out all the facts concerning which he is likely to be asked. An expert witness, who is going to be asked about his opinion, ought to prepare himself

with authorities backing up his opinion. He ought to be in a position to justify his opinion to the very utmost, because, if the cross-examining lawyer is worth his salt, that opinion may be severely tested. Physical preparation is not out of place. An important medical witness, being cross-examined by a lawyer who understands his business, has a physical strain put upon him which is not light. The lawyer feels it but it is his business, he is at it every day, but the witness has an unaccustomed physical strain; and, therefore, one going into the witness box ought to see to it that he is as far as possible physically fit.

One's personal appearance is not unimportant. The man who is decently and properly dressed will receive more consideration at the hands of the judge and at the hands of the jury than the fop, or the sloven. The medical profession never stood higher in the estimation of the people than when they had their distinctive garb of the furred robe, the cap and, with this, the gold headed cane. The Judges are wise in their day and generation when they insist on lawyers wearing the gown and being properly clothed in Court.

The rule of old Polonius still stands good:—

> Costly thy habit as thy purse can buy,
> But not expressed in fancy; rich, not gaudy:
> For the apparel oft proclaims the man.

These are preparations, things you consider before you go into the witness box, matters which will or may bear upon the value of your testimony. They won't help you to tell the truth, but none of them will hurt you in the slightest degree. All will assist you in that important matter, *i.e.*, making the truth tell.

Then, in the witness box, I have been in the habit of laying down for solicitors,rules which will look almost absurd to you when I mention them; but rules which in themselves have a wide usefulness and ought to be borne in mind by every witness. One third of the time of trial Courts is taken up with perfectly useless blather; not only useless in itself, but doing harm in beclouding the proper evidence, in belittling the other parts of the case which ought to receive attention. Now, while judges sometimes, and lawyers oftener, are responsible for that, to a great extent witnesses are also responsible for that in no few cases.

First, don't answer a question until you understand it. Now, that seems silly. Go into a court room and listen to the trial. You will find witnesses persist in answering something they are not asked, and in not answering what they are asked. If in the witness box you do not understand the question, or if the question is complicated, you have a

right to have the question put in such a shape as that you do understand it, and to have it put in such a shape as that you can answer it without deviating from the strict line of truth. If the lawyer declines (and there are men who will decline) you have a right to appeal to the judge, and it is the judge's duty to see to it that the question is put in such a way as is understandable, and that it may be fairly answered.

In the second place, when you do thoroughly understand the question, answer it as briefly and concisely as you can, consistently with the truth. If a question can be answered "Yes," or "No," answer it "Yes," or "No." If it cannot be answered "Yes," or "No," refuse to answer it "Yes," or "No." It is a well known trick in my profession to insist, with a great air of indignation, upon a direct answer to a direct question. Of course, that is simply "talkee-talkee" for the jury. Sometimes the witness yields to the insistence of the counsel and answers "Yes," or "No," when he feels and knows no such answer should be given. This is wrong. If a question cannot be answered "Yes," or "No," you have a right to appeal to the judge, and almost invariably the judge will put things right. Do not, however, be hypercritical. The counsel for the side upon which you have been summoned as a witness will give you ample opportunity to explain your answer, and frequently the judge will say, "Answer the question. You will have an opportunity to explain.' Insist on this opportunity.

Thirdly, and a more important rule than either of the others is when you get through answering a question, shut up. Men will talk and talk and talk, and the more they talk the better the cross-examining counsel likes it, because it is absolutely certain that if a man keeps his mouth wide open long enough, he is going to put his foot in it. In my experience I have seen more cases lost (I mean by incidental matters) by witnesses going on talking after they had finished their answer to the question than by anything else. If the lawyer understands his business you may be sure he will ask questions enough. If you answer all the questions he will put to you, you will be doing all the law calls upon you to do and enough to pay for all the remuneration you get.

I have been asked, what should you do supposing a question is put in such a way as that any answer to it would be misleading? Say so. You have rights as well as the cross-examining counsel, and your rights are bound to be respected. Say, "I cannot answer that question in a way that will convey the proper impression." Have the question put in such a way that you can answer it.

These three simple rules seem probably almost like baby talk, but if they were observed at least one third of the time taken up in our

courts would be saved, and at least one-half of the humiliation and mental pain which witnesses experience, both before and especially after they leave the witness box, would be prevented.

Don't despise the cross-examining counsel. Poor chap! he may not know the difference between a heart and a liver if he were to see them. He may know nothing of medicine generally, but if he is worth his salt, and if he is doing honest work for the fee that is paid to him—I withdraw that—promised him, he will know as much about the subject for the time being as you do. Don't despise him. He is in a different line of business, but if he is a first-class man he will, for the time being, know his subject; and if he is anything like a first-class man he will at least make the jury believe he knows more than you do about it.

Don't get into jangles. Don't cross swords in the way of wit with the counsel. That is our play, what we are after. Give me the witness that will jest with me, particularly an expert witness, and in nine cases out of ten he will give me what I want. If the cross-examining counsel laughs, he has either got you on the hip, or you have hit him hard. If he laughs at you, then as a rule, you have got him; but if he laughs with you, you might as well leave the witness box.

I have seen cases lost by witnesses being too smart. I have in my mind now a case (I think there is at least one gentleman in this hall who will remember it) where a medical witness, called for the defence used the word "imagination" in reference to the diagnosis of one of the medical witnesses called for the other side. Plaintiff's counsel knew that was all he wanted. Of course at once he was glowingly indignant at the idea of a member of a liberal and learned profession talking about another member of that profession using his imagination. It was perfectly useless for that medical man to say that he was using the word "imagination" in Tyndall's sense "the scientific use of the imagination." The jury did not know Tyndall and did not want to. All they knew was that one medical man ventured to say another medical man was imagining things, and promptly gave a verdict for the plaintiff.

Another medical man of the highest standing had the effect of his evidence absolutely destroyed when he admitted to me in the witness box that he was an advocate. It was perfectly useless for the gentleman to say that when he used the word "advocate" he meant an advocate for the truth. The jury knew well what an advocate was; that he was a lawyer employed and paid to speak upon one side.

Don't go and talk outside of the question and "don't get gay."

Now, Mr. Chairman and gentlemen, I have talked already longer than I intended. I have been trying to say to you something practical,

and these are not "Counsels of perfection." I know medical witnesses who under cross-examination, (while I dare say they never heard of any such rules as I have been speaking of) have followed exactly the spirit of these rules as though they had them in mind. Any medical man who respects himself, and is willing to do what is right, need have no fear of his position in the witness-box under cross-examination if, first, he understands his business; secondly, he takes pains to prepare himself, and, thirdly, he is willing to tell the truth.

Gentlemen, I thank you very heartily for your kindness and the honour you have conferred upon me. If anything I have said will in the slightest degree assist you in the future, I am more than repaid.

(The above address is from the stenographer's notes, and has not been revised by Mr. Riddell.)

APPENDICITIS FROM THE STANDPOINT OF THE COUNTRY DOCTOR.*

BY JOHN W. S. McCULLOUGH, M.D., Alliston, Ont.

Appendicitis is a very common and frequently fatal affection. It is the cause of the majority of cases of peritontis in the male and of the most of those in the female, excepting those cases which arise in connection with some affection of the genito urinary organs.

There are a few facts relating to the appendix which tend to make apparent why this organ is so liable to inflammatory affections. First of all it is understood to be a degenerate organ without any known function, consequently it has poor nutrition. Added to this it has a scanty blood supply. There is but one small artery from the ilio-colic branch of the superior mesenteric. Its mesentery often does not reach nearly to the distal end of the organ. It is a blind pouch with small calibre and such slender canals are known to be liable to stricture. Its walls have no circular musculary fibres, and consequently it is unable to readily empty itself of the fecal matter and various foreign bodies with which in its dependent position, it is liable to become distended. It has a relatively large amount of lymphoid tissue in its walls. Its powers of absorption are large and the contents soon become dry and harden. Its contents from their various nature are the habitat of various bacteria. It frequently lies upon the Psoas muscle and is therefore liable to irritation from the constant movement of this muscle.

Inflammation of the appendix may begin in its muscosa. The lining membrane may afford an entrance to bacteria through an erosion produced by hardened fecal matter or a foreign body. Pressure of its

*Read at the Ontario Medical Association, 16th June, 1903.

contents may cause stasis of the feeble circulation, and, by lowering nutrition of the mucosa, allow of the invasion of the colon bacillus, while kinking, or distortion of the mesentery, or a thrombosis of the blood vessel, may cut off the circulation. These two factors, lowered nutrition, from whatever cause, and the entrance of bacteria are the foundations of the pathology of appendicitis. Resulting from these conditions we may have either the mildest of attacks, productive simply of colic or a local inflammation of a portion of the mucosa, with eventual formation of a tiny stricture of its lumen; or swelling and hyperplasia of the whole organ, ulceration, perforation, gangrene of a portion or all of the appendix, the formation of a circumscribed abscess, pus formation in the subperitoneal tissue, or general septic peritonitis. The progress may be very slow and the disease may succumb to nature's efforts at a cure, or it may be so rapid that a few hours may decide the fate of the patient.

If the attack is a mild one and the patient happily recovers, a condition may be, and frequently is, left which more than ever leaves him susceptible to future attacks. The strictured condition often seen after more or less mild attacks allows of the contents of the appendix to the distal side of the stricture becoming very hard and acting as a foreign body.

Serious inflammation may have bound the organ to other portions of the intestines or to other organs, to its own mesentery or to itself. Some of these conditions may account for the constipation, the pain and the digestive disturbance seen in chronic cases.

Symptoms.—The most important symptoms are sudden acute pain in the abdomen, nausea and vomiting, with coincident or subsequent rigidity of the abdominal muscles of the right side and tenderness in right iliac region. The pain is colicky, is spoken of by the laity as "cramps," and is due to reflex irritation carried through the branches of the superior mesenteric plexus. The nausea and vomiting are due to irritation of the sympathetic nerves. The rigidity is due to the fact that the muscles are striving to protect the tender organ underneath, while the tenderness itself shows that peritonitis has commenced.

While these are the earliest and most characteristic symptoms there is usually fever and increase in pulse-rate. Some authorities instruct us to pay little attention to the pulse and temperature, yet they undoubtedly, when they are carefully considered, afford some assistance. If the affection is due to the colon bacillus, which perhaps the larger number of these cases are, the temperature and pulse may be but little elevated. If due to a streptococcus or mixed infection, the temperature may reach 102°. F. or more, with a correspondingly rapid pulse. With the condi-

tion of perforation or gangrene of the appendix, the pulse and temperature may be normal or subnormal. If the case is making unfavourable progress, the tenderness may increase may be elicited by pressure on the left side. There may be more or less distension of the abdomen and dulness over the right iliac fossa. Delirium, persistent vomiting, signs of shock and chills are unfavourable symptoms. The condition of the bowels may be unchanged or there may be constipation or diarrhœa. The patient's face may show anxiety. The appetite is usually gone. Hiccough is a most unfavourable symptom.

Diagnosis.—A correct diagnosis, and especially an early one, is most important. Fortunately in most of cases when seen early it is not particularly difficult, but it is much more difficult and often well-nigh impossible to say at a later period just what condition will be found inside the abdomen. I have known cases operated on within 15 hours after the onset of first symptom and a circumscribed abscess found, and I have known others in which the attending surgeon refused operation—not believing it necessary, as the patient appeared to be improving—to subsequently have a large collection of pus in the abdominal cavity. Occasionally pain and tenderness may be confined to the left side. These cases are ones in which there is either a long appendix pointing towards the left side, or else there are adhesions, confining a branch of a nerve, through which the pain is reflexly carried. One of the earliest chronic cases I saw had no pain except in the region of the lower border of the ribs on the left side. The appendix was hard, bent on itself like one's flexed little finger, and with its tip adherent to the cæcum. Following its removal there has been no pain for the last seven years. The cardinal symptoms of sudden pain, beginning in the region of the umbilicus, with nausea, vomiting and rigidity of the muscles, followed by tenderness over McBurney's point, are the ones to be relied on in making a diagnosis.

We will require to differentiate between Appendicitis and :—

1. Tubo-ovarian disease.
2. Affections of the Gall-Bladder and Ducts.
3. Affections of the Kidney.
4. Affections of other portions of the intestines.

1. *Tubo-ovarian Diseases.*—In this disease which is more common on the left than on the right side, the pain is not usually so sudden in its onset nor so colicky. There is not the rigidity of the abdominal wall which is found in appendicitis. A history of genito-urinary disease if it can be obtained will aid in clearing up the diagnosis. Most helpful of all will be an examination under anæsthesia.

In ectopic gestation the sudden collapse following rupture of the sac might be confounded with perforation in appendicitis. The puerperal age and the symptoms in pregnancy, if such can be obtained, will be of value in separating the affections.

2. *Affections of the Gall Bladder and Ducts.*—In hepatic colic the pain is found in the upper part of the abdomen and radiates towards the right shoulder. There may be tenderness over the gall-bladder, vomiting is more persistent than in appendicitis. The temperature is irregular, high at times and low at others. There is often jaundice.

In case of collapse from rupture of the gall-bladder an error might be made Usually, however, there is some history which will clear up the case. But in other cases nothing but explanatory incision will diagnose the condition.

3. Renal colic may be confused with appendicitis I recollect seeing a patient in consultation, who had an unmistakeable attack of renal colic and along with it appendicitis, for which he was operated on in a few days.

4. Illustrative of the difficulty in separating this from other intestinal affections permit me to give a few notes of a rather unique case a short time ago. The patient was a hearty baby girl, sixteen and one-half months old. She had some pain and vomiting at 10 p.m., Sunday, for which her mother gave a dose of castor oil. As a result she slept all night, and at 1 pm., Monday the bowels moved freely. She had a return of pain and vomiting. I saw her at 3 p.m. and found her in a state of shock, for which I gave her a saline enema, mustard bath and gr. 1/60 strych. sulph. hypodermatically. She was relieved in a couple of hours. On return of pain a second enema was given. There was a slight discharge of blood from the bowel. The pain and vomiting recurred with greater severity. There developed tenderness and rigidity on the right side of the abdomen, with perhaps a slight distention. A colleague in consultation with me that evening agreed as to the likelihood of appendicitis, but suggested that considering the severe shock and the passage of blood there might be a volvulus. There being an increase of the symptoms I did a celiotomy next morning, 36 hours after onset of first symptoms, and removed a highly-inflamed appendix, almost black for an inch round the tip, and found in addition a volvulus of about six inches of the ileum just above its junction with the large bowel. There was a knuckle of the ileum pushed in the angle formed by the calcum and its mesentery and adherent there. About four inches of the ileum was dark and angry looking. Hot gauze compresses were assiduously applied, and after half an hour the circulation was restored

and the abdominal wound closed without drainage. The little patient has made a prompt recovery. In this case I cannot say which was the primary condition, nor whether one had anything to do with the production of the other.

Treatment.—In the light of our knowledge of the pathological conditions found in appendicitis the treatment in all but the mildest cases should be surgical. At the outset the patient should be given an enema and a mild laxative of castor oil, or repeated small doses of calomel. For the relief of pain, chloroform water or spirits of chloroform may be given as required. Every case must be treated on its own merits, but any case that does not show improvement or which gets progressively worse during the first twenty-four hours should be operated upon. Mild cases undoubtedly get well without much treatment of any kind, but with due deference to those who pin their faith to the opium or morphine treatment, I doubt if it ever effects anything in appendicitis except to ease the pain and fool everyone about the case who is not on the alert as to its masking qualities. But opium has its place, and having decided upon operation and while making preparations to open the abdomen, a dose of morphine combined with atropine and strychnine will do good service in quieting the nerves of the patient and will leave him in better condition for operation than if he is allowed to suffer without it. The dose should not be large and its purpose understood.

It is not so easy to operate in the country as in the city, but not withstanding the absence of well-equipped operating rooms, the best surgical appliances and good nurses, good results are obtained in the surgical treatment of this affection by the country doctor, and for two reasons. He can operate at the earliest possible moment when he has the best prospect of success; and the absence of noise and dust, incident to a city, with the benefit derived from pure air, perhaps, go far to make up for what he may lack in surgical skill and surroundings.

The operation in uncomplicated cases of appendicitis is a comparatively easy one, with ordinary equipment and scrupulous attention to aseptic conditions these cases do well. If the country doctor is constantly on the alert in appendicitis cases, few of them should become complicated. If they go for days or weeks without improvement, a condition may be eventually found which will tax the skill of the most experienced.

In cases which have gone to the formation of a local circumscribed abscess, the pus should be washed out or gently swabbed out. If the appendix or what remains of it can be readily recognized it may be

removed, but the greatest care must be taken not to disturb the limiting wall of the abscess. In these abscess cases we should be reasonably satisfied that more than one pus collection does not exist. Cases of general septic peritonitis should be judged on their merits, and we should operate or not just as we deem best in the interest of our patients. For the sake of our reputation perhaps a large number of these cases had best be left alone.

Finally, in all cases where the country doctor decides to operate he will but conduce to the patient's comfort and safety, and his own success and peace of mind by having a good trained nurse. Perhaps no other adjunct except his skill as a diagnostician and an operator will make so much for success as this factor.

The mild cases should be operated on in the interval. In chronic cases all are agreed as to operation. Fulminant cases require to be operated on without an hour's delay.

CONTAGIOUS DISEASES IN THEIR ECONOMIC RELATIONSHIPS.*

By P. H. BRYCE, M.A., M.D.,
Secretary to the Provincial Board of Health, and Registrar General for the Province of Ontario.

MR. Chairman and gentlemen of the Ontario Medical Association :— It is a somewhat remarkable fact, in the voluminous literature of political economy on the functions of governments in their relations to questions of national defence, international trade, internal development and the care of the rights of the individual, that I have found in none, even of the most comprehensive works on the subject, a single chapter dealing specifically with the subject about which I propose to make a few brief remarks.

It is quite true that sanitariums and prominent members of the medical profession have frequently illustrated by the effect upon trade and the losses which a country or a community may sustain, have shown the costliness of epidemics, and by estimating the value to the state of the labor of a man to have measured the productive losses to any country through deaths of wage-earners from preventable disease. But I find nowhere any clear and well balanced study of the problem of "what are the clear and indefeasible rights of, say the individual or his family, when attacked with a serious communicable disease, of the neighbor or other fellow citizen who may be exposed to danger of con-

*Read at the Ontario Medical Association, 18th June.

tracting the disease, and of the community or state, in which an epidemic occurs, in connection with such a disease."

It is manifest, however, that it is a sociological question of the highest possible interest, whether considered from the vital, commercial, or philanthropic standpoint, and that it must admit, like other similar problems, of some adequate solution, and the discovery of some underlying principles or axioms upon which intelligent continuity of action, whether of the state or the individual, may be based.

If we may be permitted to surmise why writers on economics, from Plato's time to almost the present, have omitted to treat of this question, I am inclined to think we shall find that the lack, until the last quarter of a century, even in the medical profession, of any accurate knowledge of the origin of exciting cause of communicable diseases, together with the not yet wholly eradicated idea that we are marks of divine displeasure, have prevented writers from dealing with the question in any broad or philosophic manner.

From earliest historical times, the god as Moloch, demanded the costliest sacrifice, and even the first-born child was not to be kept back from him; and when Malthus, the philosopher, wrote in 1803. "Diseases, instead of being the inevitable affliction of Providence, are indications that we have offended against some of the laws of nature," it must have caused a shock, like some of his other theories, to those who had hitherto been accustomed to measure the attitude of the Almighty to his creatures by the degree of their individual or general prosperity.

We may, in order to have some modern starting point, use the dictum of Jeremy Benthan, the good old eighteenth century utilitarian philosopher that "the greatest good to the greatest number," or as put by Dr. Martineau, "from each for himself to each for all," as a good practical guide to action to-day as when it was written, since it is based upon the principle laid down by the Master of all ages that "Whatsoever ye would that men do unto you, do ye so even to them."

We must then briefly enquire in what way society may deal, under our existing knowledge and ethical ideas, with the serious communicable diseases. We may start from either end, either from the standpoint of the individual or that of society or the state, since any principles which are scientifically correct, will be applicable equally to both.

The Individual.

Eliminating the punitive idea from the situation, we must view the individual who contracts a contageous disease as the subject of the operation of some nature law, discovered or hidden, and while there may,

from the ethetical standpoint, be personal responsibility on his part through ignorance, rash exposure, lessening of the defence through overwork or dissipation, all modern humanitarian sentiment will look upon such a one, to use a common expression, as " the victim of circumstances."

Especially must we say this of the helpless child, the commonest victim of these maladies, even though parents may have been culpable or negligent. Towards such a one our attitude must not be that of the ancient who cried, " Room for the leper," but exactly opposite, viz., that of one with the active sympathy of human brotherhood, which fortunately, modern science enables us to practice without the exercise of any great personal heroism. For such a one then we are expected to act with a view to his highest welfare, by giving to him every opportunity, through housing, medical care and nursing, to proceed to a safe and speedy cure.

The Family of the Individual.

As with the growth of society up from the individual in barbarism, the problem now becomes more complex. The lives of other members of the family must, if possible, be protected, and from the humanitarian standpoint, it is quite clear that not alone the sick child but his brother, sister, play-mate, and school-mate, must be, if possible, considered, while from the economic standpoint the father, etc., as a wage-earner, enter into the problem.

The Commission and State.

Enlarge the problem so that its true proportions may be seen, as that where virulent smallpox invades a city as it did in Cleveland, Ohio, in 1902, or Galt, Ontario, a little later ; or suppose cholera, as invading Western Europe via the Mediterranean, or the plague America, via Vancouver, and it is quite apparent that the commercial and economic phase assumes a prominence over-topping all academic questions of individual or family rights. The matter to be dealt with under these circumstances has passed, as when war is declared, beyond the subtle refinements of diplomacy and becomes a battle of giants—the patriotism of Theseus against a devouring minotaur.

What then are the scientific, and therefore, in my judgment, necessarily the ethical and practical demands of the situation when a child is attacked ? Assume the case to be in a farm-house and it is quite apparent that with the restriction of the patient at home, the keeping of children from school and those nursing the child from the public, and the public from the house, that the public safety is amply guarded. The

difficulty, however, continues to exist. That the farm-house is an hospital, that all will depend upon the size of the house, the complete isolation therein of the nurse and the maintenance of such isolation for a period of six weeks. What the practical results of such a procedure are in dealing, say with scarlet fever, may be judged from the fact that it is comparatively seldom that one case occurs in a family of children without others taking it, and that a general house infection results is within the experience of most of us. But assuming the avoidance of such results is possible, there is still another feature of the situation we must consider. Quarantine of the several school children and loss of time have been inevitable, and if there are older persons in the house their quarantine in the benefit of the public has or ought to have been insisted upon; while the final outlay in the shape of a complete disinfection, which to be thorough is costly, is of course inevitable.

Should, however, a similar outbreak occur in a house in town, it may be said that the same methods may be carried out equally well. Does our experience confirm this?

Only last week a cottage in the city was placarded for scarlet fever, and a day or two later the patient, a girl, was dead. The mother of the house, while crape was on the door, had her infant on the street in its carriage; a necessary thing for the poor child indeed, but with the result that the neighbor's children approached and even kissed the child. A day or two later the infant had scarlet fever. It is apparent that the case in the country and that in the town are, from the public standpoint, quite different.

Clearly the problem as it affects the neighbors and the public in the city is not solved in the given circumstances.

I have thus broadly stated the case in order that we may give the proper value to the various factors entering into the problem. We see in the instance given the first case dead, the mother of the child who was sister of the patient, in the difficult position of wishing to protect both, and, as the result has shown, protecting neither.

I have during the past twenty years endeavoured not only to investigate conditions and judge of the broad results of the operation of outbreaks of disease from the scientific standpoint, but also the bearing of particular features of public health acts in so far as they have affected the vital and material interests of our communities. Any one who has followed the legislation of the past century, in countries such as England must have often thought of the amazing change from laws of Draconian severity, whereby even as late as 1839 there were thirty-nine offences for which death was the penalty, to those of the present day. The old

statute of 1774 provided that if a ship' captain entered the port of Quebec, coming from a port where contagious disease prevailed, without first anchoring off shore and notifying the authorities, he was liable to be hanged forthwith; while to-day the person who even knowingly exposes a neighbor's child to a fatal disease is often excused and practically never punished.

It is quite clear, therefore, that our laws demand a *via media*, some common ground whereby the highest good to the largest number may result.

It is now nineteen years since the Public Health Act of Ontario was modelled largely on the English Public Health Act, consolidated in 1875, and the more I have seen the practical operations of its provisions, the more I have wondered at the practical wisdom in, and the exactness of its clauses for dealing with contagious diseases, in so far as exact knowledge regarding the several diseases had advanced at that time. I shall refer to only two or three of them.

The state says to the physician whenever you know that you have in your practice a dangerous communicable disease you and the householder must both notify the state, that is, a municipal officer. Why does the state require this? Because experience has shown that the individual householder may not know or appreciate the dangerous element his household may become in the community, or he may be too much concerned about the immediate inconvenience he may be put to, to be capable of judging of the situation impartially as regards the public. Further, in so far as he exercises an influence on the family physician, he makes it difficult for the latter to act independently of this view of the matter.

The Act next says, the municipality having been informed, necessarily must interest itself in the case, and under liability to damages for neglect must take steps as the Act provides for the protection of the public.

For instance, section 93 of the Public Health Act states that the health authorities, on being notified of a case of a dangerous communicable disease, shall at once make effective provision in the manner which to them seems best for the public safety by removing such person to a separate house or otherwise isolating him, if it can be done without danger to his health, and by providing nurses and other assistance and necessaries for him at his own cost and charge, or the cost of his parents or other person or persons liable for his support if able to pay the same, otherwise at the cost and charge of the municipality.

The spirit and intention of this clause are so clearly and admirably expressed, that now at the end of twenty years I think there is none of us who could suggest a word which would improve it.

It clearly contains the idea that if a disease is contagious, it will infect non-immunized persons, if they are exposed to it, and in 1885, during the great smallpox epidemic, Sir Oliver Mowat gave even greater definiteness to the clause in the smallpox regulations, which require that not only must a patient sick of smallpox be removed to an isolated building or hospital tent, but that all exposed persons be placed in a separate house and be vaccinated, and kept under observation until the incubation is over.

These clauses have their necessary corollary in section 106 of the Act, which provides that the municipality, if it has not already provided, must provide an hospital to which such cases may be removed, and in which persons will be treated by their own physicians and at their own expense.

I have given the substance of these several clauses, because in a remarkable way they serve to bring out the bearing of the Public Health Act, as it deals first with the liberty of the individual, and second, with the way in which it associates the liberty of one person with the interests of another.

All modern writers, in dealing with the "functions of Government," take as one of their starting points, this so-called "principle of national liberty, *laissez-faire* or minimum interference." The philosopher, Adam Smith, says, "Every man is left free to follow out his own way," with the remarkable caveat, "as long as he does not violate the laws of justice." It is, therefore, evident that with regard to the matter under consideration we have, if possible, to determine what the laws of justice are; and, having thus decided, we must then apply to the case the practical rule as regards government action, viz.: "That through the whole range of government functions, the line of demarkation between the necessary and the optional, is equally variable and uncertain."

If then the interests of the several persons already referred to are to receive equal justice and consideration; and if we have shown how intimate the relations of one to another are, it is apparent that the application of the last rule is comparatively easy. Thus it may be, and indeed is, necessary to apply to an outbreak of virulent scarlatina, a positive line of action by regulations, which might be unnecessary with an outbreak of measles. Hence it is apparent, that, as Prof. Nicholson of Edinburgh remarks in his sociology, "The functions of government are so varied and complex, as to elude any simple classification."

The older writers of the utilitarian school of philosophy taught with much plausibility that self-interest, properly interpreted, was equally the public interest; but it is plain that self-interest is a variable

conception, as from the very nature of things it must be, depending upon the ethical plane upon which the thought of any individual mind finds itself. That this coincides with the correctness of the scientific principles underlying any course of action, whether dealing with wages, production, defence of the state, or the protection of the individual, must, I think, be admitted.

Benjamin Kidd, in his work on "Social Evolution," states, what all will agree with, that among the nations that have acquired an ever increasing ascendancy, have been those which have possessed the best ethical systems; that is to say, ethical systems which, having secured the subordination of the present interests of the individual to the larger interests of an infinitely longer-lived social organism, have been allowed the fullest possible development of the powers and the faculties of all the individuals concerned.

It hence will be apparent to this Association, if the interpretation which has been placed upon the various elements entering our subject is correct, that the intelligent self-interest of every member of the community demands in the interests of the individual, of the family, of the community and of the state, a line of action which comports with the liberty of the citizen, as understood by Adam Smith, since it means justice to all, and of necessity, as Kidd says, the larger interests of the social organism of the state. It hence must result in the greatest happiness of the greatest number, thus fulfilling Brentley's axiom, and inasmuch as it fulfils the spirit of the Divine Teacher, who thought not of himself, it must fulfil all the requirements of a law of pure science, which in its application to practical affairs, is as unalterably true, as the law of gravitation to the deepest and most obstruse problems of pure physics.

It becomes a matter after all of social evolution along the lines of science, which has been thus expressed by Pope.

> Self love but serves the virtuous mind to wake
> As the small pebble stirs the peaceful lake;
> The centre moved, a circle straight succeeds;
> Another still and still another spreads;
> Friend, parent, neighbor, first it will embrace,
> His country next, and next the human race.

Protargol, in the strength of 17. to 2 % solution, is a valuable treatment for gonorrhœa. Three drams of the solution is injected from one to three times daily. When used as above directed, it is not irritating, and has a very beneficial effect on the discharge.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY O. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

ALARMING HÆMORRHAGE FOLLOWING EXCISION OF TONSILS AND ADENOIDS.

Bulson, in the *Fort Wayne Medical Journal* (April, 1903), cites an interesting case of secondary hæmorrhage following this operation. The patient, a boy, six years of age, presented no unusual features either during the operation or immediately following. He was kept under constant observation for two hours after being operated upon. He was then sent home, but eight hours subsequently a report from the patient's home said he was very restless, breathing badly and had vomited a great quantity of blood. It appeared that the hæmorrhage came from the naso-pharynx. Adrenalin solution was freely used and saline transfusion was administered. This appeared to excite more hæmorrhage later on, probably by raising the blood pressure, and, perhaps, would not have occurred had the naso-pharynx been plugged. The patient eventually recovered, but the case seems to impress upon our minds the possible seriousness of the operation, and the necessity of complete rest and constant supervision for a day or two, at least, following the operation.

NASAL TREATMENT FOR THE CURE OF DISEASES OF THE EAR.

Alex. W. Stirling has a very carefully written article on this interesting matter in the April issue of *The Laryngoscope*. He brings forward a thesis, which is neither new nor original, since McBride (Edinburg) and Sir Felix Semon (London) several years ago took the same grounds. His motto is as follows: *Intra nasal treatment is ineffectual for the relief of deafness, unless such treatment is also advisable for the sake of the nose itself.* In the term nose it is also meant to include, incorrectly the reviewer thinks, the naso-pharynx. The form of deafness to which particular attention is drawn is that known as sclerosis of the middle ear. Operative measures on the nose or naso-pharynx in this form of deafness simply brings rhinology into disrepute, and may have a markedly deleterious effect on the patient's condition. In cases of aural catarrh, Stirling says nasal treatment should be limited to the removal of conditions which may be interfering with the recovery of the mucous membrane lying between the nose and the tympanum. This is a very different thing from a pernicious attack upon every irregularity which one may be able to discover within the nose.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

The Montreal League for the Prevention of Tuberculosis is carrying on its work in no half-hearted manner. In conjunction with the Board of Health it has sent out a circular letter to all the medical men in the city, asking for their co-operation in this matter by notification of the tuberculous patients under their care, and, thus informed, the Board of Health will see that every case is regularly visited by an inspector, whose duty it will be to instruct both the patient and his entourage regarding the disposal of the sputum, and the simple methods of cleanliness and disinfection, as well as to distribute leaflets bearing upon the subject. The League will undertake to procure nursing, special dietary foods, disinfectants, sanitary cuspidors, etc., for the indigent cases. Again a deputation, headed by Dr. T. G. Roddick, M. P., waited upon His Worship, the Mayor, and presented him with the following petition:

1. The Montreal League for the Prevention of Tuberculosis beg to submit for the consideration of yourself and of the aldermen of the city of Montreal, the advisability of enacting a by-law prohibiting spitting upon the sidewalks and floors of street cars and other public conveyances, and of halls and other public places.

2. We beg respectfully to call your attention to the position which other cities in Canada stand in with regard to this matter.

(*a*) Toronto has no by-law, but is applying to the Legislature for power to make one on the subject. (*b*) Ottawa has a by-law in force. (*c*) Winnipeg has no by-law at present, but the Mayor is now bringing it before the City Council. (*d*) Hamilton has no by-law, but signs are up in the streets asking the citizens not to spit on the sidewalks.

3. We respectfully suggest that the by-law be in the following form or to the following effect:—

By-law to prohibit spitting upon sidewalks, the floors of street cars, and other public conveyances, halls and other public places.

1. No person shall spit upon any sidewalk or upon the floor of any street car or other public conveyance, while upon or traversing any of the streets, lanes, or squares of the city of Montreal, or upon the floors of any theatre, opera house, music hall or hall used for public meetings,

railway or steamboat station, or waiting-room, or other public hall, building, room or place, or upon any platform surrounding, in front of, or in the immediate vicinity of, any such place.

2. Whosoever infringes the provisions of this by-law is liable to a penalty of not less than $1.00 nor more than $50, with costs of prosecution, or to imprisonment at the discretion of the court.

Dr. Mikulicz, of Breslau, the eminent German surgeon, spent a few days in Montreal on his way home from the American Congress at Washington. He visited the various hospitals of the city and operated on a case of ambilical hernia at the Montreal General Hospital. The prominent physicians and surgeons of the city had an opportunity of meeting Prof. Mikulicz at a dinner given by his host, Dr. Shepherd, at the close of his visit.

The following cases were shown at the Montreal Medico-Chirurgical Society, during the past month:—Dr. Archibald presented a living case, illustrating the treatment of a Pott's fracture by a recently adopted method. The case, which was admitted to the Royal Victoria Hospital on February 25th, showed the classical symptoms and signs of the fracture, and a skingraph confirmed the diagnosis. The limb was put up as follows: A strip of adhesive plaster was placed on the outer side of the leg from the knee to the ankle, and continued in a similar manner up the inner side of the leg as far as the knee, forming a stirrup; gauze was placed over the malleoli, and the stirrup itself was drawn in close beneath the sole of the foot and a weight of ten or twelve pounds applied for extension. A second strip was carried from the ball of the toes to the knee, to preserve the foot in a perpendicular position to the leg. A third strip encircled the ankle just above the joint, and extended outwards to the edge of the bed, where it was connected with a weight working over a pulley. This procedure fixed the joint securely in all directions in which harmful motion could take place, and left it in full view in such a way that local applications, early massage, and passive movements, could be readily employed, with consequent early restoration of function. Experiments in Germany have shown that two to two and a half weeks of convalescence have been saved to working men when this plan has been adopted. Dr. Archibald also showed a little girl who had been operated upon for sarcoma of the lower jaw. The patient was 12 years of age, and gave the history of a fall on the chin some five years before. One year later a small swelling appeared upon the inner side of the alveolar process of the lower jaw, and this gradually increased in size until a year later it was the size of a walnut and had to be removed by scraping the bone. Last April the patient was admitted to the Royal Victoria Hospital for

a recurrence of the tumor in the whole of the anterior portion of the lower jaw. A diagnosis of sarcoma having been made, the lower jaw was removed from the first molar on the left side to the first molar on the right, the ends being joined by a double loop of silver wire. The mucous membrane was joined over the wire, which formed the new chin, and, as a result, no trouble was experienced with falling back of the tongue—in fact the child could swallow food six hours after the operation.

Dr. Keenan exhibited microscopic slides demonstrating the sarcomatous nature of the growth and then presented a living case of multilocular cystic tumor of the lower jaw in a boy of thirteen. The differential diagnosis between this and the former case was thoroughly discussed by Drs. Adami and Hutchison.

Dr. Dickson showed a boy who had been operated upon for ruptured spleen. He gave a history of a fall, followed by great pain in the left side. On admission to the Royal Victoria Hospital, he was seen to be very pale and stuperose, T. 101, P. 136, R. 36, complaining of great pain and tenderness in left side. Hot applications to the painful area were applied without benefit and next day the condition was much the same, but the pain in the splenic region was more intense and the abdomen showed some rigidity. A diagnosis of probable rupture of the spleen was made and operation advised. On opening the abdomen in the mid line, between two and three quarts of clotted blood were seen lying among the coils of small intestine and were at once removed. The spleen could not be seen but was felt to be hard and firm. The abdomen was cleaned up and closed and the boy made a good recovery, leaving the hospital twenty-one days after operation.

Dr. Fry brought in a patient for examination who had complete transposition of viscera. She had appeared at Dr. Martin's clinic at the Royal Victoria Hospital several years before, and then had vanished, but turned up again this spring complaining of cough. On inspection of the chest, the apex beat was seen in the 5th space on the right side about $3\frac{1}{2}$ ins. from the mid sternal line. It was palpable in the same interspace, while a rough systolic thrill could be felt at the base. Dulness was of normal size but of course upon the right side of the sternum. A rough systolic thrill could be heard at the base over the pulmonary valve. The liver, spleen and stomach could be easily demonstrated to be transposed in a similar way. The patient appeared to be in good health and with the exception of being rather under the middle height was on casual examination quite normal.

Dr. J. A. Hutchison reported a case of sarcoma of the fibula followed by paraplegia. The patient was a woman who came to the Montreal General Hospital in January complaining of painful swelling of the right leg. Examination showed that the woman was greatly emaciated and that the right leg was enormously swollen and oedematous, dilated veins coursed over the surface of the tumour, and the fibula could not be palpated, although the tibia appeared to be quite normal. The glands at the groin were markedly enlarged and the superficial glands all over the body were palpable. A diagnosis of sarcoma of the fibula was made, and the limb amputated at the mid thigh. A few days after operation paraplegia came on with a band of hyperaesthesia about the waist, bladder, and rectal incontinence supervened and transverse myelitis, due to metastasis, was diagnosed. The patient unfortunately left the hospital and the subsequent history could not be ascertained.

At the last meeting of the Board of Governors of McGill University, a number of appointments to the teaching staff of the University were made, including the following in the Faculty of Medicine:

Dr. J. G. McCarthy, appointed Assistant Professor of Anatomy at McGill.

Dr. J. T. Halsey, appointed Assistant Professor of Pharmacology and Therapeutics.

Dr. S. Ridley Mackenzie, appointed Lecturer in Clinical Surgery at McGill.

Dr. John McCrae, appointed Lecturer in Pathology.

Dr. D. A. Shirres, appointed Lecturer in Neuro-Pathology.

Dr. D. D. McTaggart, appointed Lecturer in Medico-Legal Pathology.

Dr. R. A. Kerry, appointed Lecturer in Pharmacology and Therapeutics.

Dr. Lorenz told the story that when he started out with high hopes of becoming a surgeon, he was greatly disappointed by the appearance of eczema of the hands, which rendered it impossible for him to render them aseptic, and tolerate the constant use of the requisite solutions. His colleague, Professor Albert, suggested to him to try dry surgery. The outcome of this suggestion was that Dr. Lorenz devoted his attention to the correction of deformities by bloodless methods.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

NOVA SCOTIA MEDICAL SOCIETY.

The 35th annual meeting of the above society was held on 1st and 2nd July, in Antigonish. There was a fair attendance, and an excellent programme. Dr. Marcy, of Boston, gave the address in Surgery; and Dr. Campbell, of Montreal, the address in Medicine. A committee was appointed to look after the interests of the medical profession in all matters of legislation affecting it; and to bring before the notice of the government, deficiencies in the statutes regarding the registration of births and deaths, the payment of expert witnesses, etc. Dr. Marcy, of Boston, gave a sum of money, for the best paper on the history of medicine in Nova Scotia, prior to the formation of the Nova Scotia Medical Society. Dr. W. A. Campbell showed that the society was in its 50th year, and not its 35th, as claimed by the officers. There was a full discussion on tubercular anthritis, which elicited the main features of the pathology and treatment. On the evening of the second day, there was a very enjoyable smoking concert, in the large hall of St. Francis Xavier College. The other papers read during the meeting were:— "Method of blood examination for the general practitioner," by Dr. F. E. Lawlor, of Nova Scotia Hospital, Dartmouth; "Insomnia," by Dr. H. H. McKay, New Glasgow; "Notes on some skin diseases," by Dr. J. Ross, Halifax; "A case of general peritonitis, with recovery," by Dr. R. A. H. McKuen, Glen Bay; "Toxic hæmoglobinuria," by Dr. J. L. Churchill, Isaac's Harbour; "Personal hygiene," by Dr. Clay, Pugwash; "Caesarian section," by Dr. Hayes, Parrsboro; "Acute inversion of the uterus," by Dr. C. P. Bissett; "Strangulated hernia," by Dr. D. Murray; "Nasal tumors," by Dr. G. Cox; "Mastoiditis," by Dr. W. G. Putman; and "Venesection," by Dr. M. Chasholm, Halifax.

HALIFAX MEDICAL COLLEGE.

The 35th annual report of the Halifax Medical College has just come to hand. It is neatly got up and among other improvements may be mentioned six full page photographs, including the pathological laboratory, the Victoria General Hospital—operating rooms and wards of the same. The number of undergraduates attending classes during the past season was 78, an increase over the previous one of some fifteen students. The college building is situated quite close to Dalhousie, the Victoria General Hospital and City Alms House. The Protestant and

Roman Catholic Infants' Homes are within easy reach. At these latter institutions clinical instruction is given in all the more common diseases of childhood. The pathological laboratory of the college has been enlarged and is now up-to-date. An Act respecting the study of anatomy was recently passed by the Nova Scotia Legislature appointing an inspector of anatomy. By this Act it is possible now to get an ample supply of material for the dissecting room. The library has also been greatly added to during the recent session. By the Cogswell bequest the interest of a certain sum is yearly applied to this purpose. This enables the college to purchase all the more recent books of reference. There is also a library at the Victoria General Hospital which can be consulted at any time by students. Five vacancies occur each spring on the resident staff of the hospital. These vacancies are filled as a result of competitive examinations. The graduates of this college are elegible for such positions. Some changes of minor importance have been made on the teaching staff. The present session begins on September 1st.

PERSONALS.

The month of June saw the marriage of the following Maritime Province medical men :—

June 2nd, Dr. E. V. Hogan to Miss Margaret Carney, of Halifax.

Dr. Joseph J. Doyle, of Halifax, was married to Miss Edith Brennan, at Salem, Mass.

Dr. Jane Heartz to Andrew J. Bell, Esq., of Halifax.

Dr. Arthur Doul to Miss Mary Burgess, of Milford, N.H.

Dr. S. M. Weeks, of Newport, Hants County, celebrated his 50th year in the practice of medicine on April 11th. Dr. Weeks is still hale and hearty and in active practice. The doctor was presented with an address, accompanied by a silver tea service, by some of his many friends in the profession.

Dr. L. M. Murray, Provincial Bacteriologist for Nova Scotia, has returned from a visit to Montreal, Baltimore, New York and other cities. While away Dr. Murray devoted special attention to bacteriology and pathology.

Dr. John Black, of Halifax, who for the past two years has been visiting London and the great medical centres of Europe, intends returning this fall.

Dr. Pearman, of Halifax, has been visiting London and Vienna. The doctor will return shortly.

Dr. Nelson Pratt of Stewiacke, N.S., has, owing to ill-health, been compelled to take an extended rest. The doctor's many friends hope that he will soon be restored to perfect health.

MANITOBA MEDICAL NEWS.

Conducted by R. H. Richards, M.D., C.M., Winnipeg.

The members of the Southern Manitoba Medical Association were the guests of the Winnipeg Medical Association in this city on June 25th. Dinner was served at a suburban hotel, after which there was a joint meeting to discuss tuberculosis, and the establishment of a provincial sanitarium. The following physicians read papers:—Drs. Husband of Wawanesa, Hardy of Morden, Chown, Montgomery and Webster of Winnipeg.

The appeal of the Winnipeg General Hospital to the Dominion Government for funds to aid the building of an addition to the present structure met with a decided refusal, the Ottawa officials stating that it was altogether the duty of the Province to care for its own sick and indigent, and that the federal government was expending enough money and effort to get people into the Province, which should be grateful accordingly. The hospital board may therefore well pray that in future the immigration department will shower its blessings of Doukhobors and Galicians lightly, as this element makes up two-thirds of our charity patients. As at present there is only the provincial grant of $25,000 available, the board have made an appeal to the city council for $25,000, promising that if it be granted they will personally finance the balance of $50,000 for the erection of the $100,000 addition which is a crying need.

At the regular monthly meeting of the Winnipeg Medical Association, Dr. A. J. Douglass showed two cases of ichthyosis hystrix in children, 3 and 5 years old respectively. It had been present in male members of the family for several generations. Thyoid gland extract had been administered for some months with slight improvement.

Dr. James McKenty gave the history of a peculiar case of sleepiness. The patient is now a big strong man. In 1891, when 12 years old, of average size and well nourished, drowsiness began. He had never had any serious sickness previously. His trouble began by his being constantly sleepy. He would go to sleep in school or church, at his meals, anywhere and anytime, would go to sleep in the chair in doctor's office while his father was relating the case. The father thought the boy would sleep continuously if permitted. Prior to the onset of the trouble the boy was a good student, learned quickly, and was bright and

intelligent. In 1893, on pressing the question, the patient admitted the habit of masturbation, which he had begun some months before the sleepiness commenced. At present, the patient still masturbates and is still drowsy, but less so for the past two years. Has had a varicocele for 6 or 7 years. The general health is good.

Considerable discussion followed without eliciting a similar case. Dr. Good, the president, opposed the idea that the condition might be the result of masturbation.

Various forms of treatment, including thyroid gland extract, had been tried, but without results.

Dr. J. A. Macarthur told of two cases of general melanosis, or melano-sarcoma, that had been under his care with rapidly fatal termination.

Dr. E. S. Moorhead read a carefully prepared paper, taking as his subject "The Influence of Heredity on the Junior Practitioner." The gist of the speaker's remarks was that the public have in ages past become so used to associate gray hairs with wisdom in medicine that their modern descendants, the present public, do not eagerly embrace professionally the recent product of the schools, although, owing to such splendid teaching facilities and the age at which most men graduate, the very opposite state of affairs to that which was assumed to be true in the past, must prevail now."

The discussion was limited to the remarks of Dr. Good, the chairman, who said that he did not agree with the speaker. Firstly, because he did not think it was so; and secondly, he did not think the reasons given explained it anyway. He went on to say that he was no longer young, and, though not yet grey-haired, he was kept in a state of incipient apoplexy on observing the phenomenal success of some of the junior practitioners. He thought the public were as naturally afraid of the freshly graduated as was the boy off whose head William Tell shot his first apple, afraid of his operator.

The by-law to raise $100,000 for the erection of a Civic Isolation Hospital in Winnipeg for infectious diseases, other than smallpox, was defeated.

This is a most regrettable result, as the proposed scheme would not only have relieved the crowded state of the other hospitals, but would have removed what has proved to be a serious menace to ordinary medical and surgical cases. The proximity of the scarlet fever and diphtheria pavilions to the largest hospital is a source of danger. At the same time the daily press contains a report of diphtheria in scarlet fever pavilion, and vice versa, at general hospital. The hospital board,

in explanation, states that in the present crowded state of the hospital such an occurrence is well nigh inevitable.

At the last meeting of the Alumni of Manitoba Medical College, Dr. W. L. Watt read a paper on the Treatment of Abortions and Miscarriage. In referring to his experience of some 400 cases the doctor said :—"Interference in any abortion depends, not so much on the hæmorrhage, pains, etc., as on the general condition of the patient. It is sometimes hard to say whether an abortion is inevitable or not, but it is always easy to determine when a patient's condition is in anyway dangerous from loss of blood, etc. Stress must be laid upon the diagnosis between complete and incomplete abortion. An abortion is incomplete if the hæmorrhage continues, and if, on vaginal examination, the internal os is found to be patulous. In all such cases, the large flushing curette should be used, and the uterus thoroughly cleaned out, even after the removal of the ovum with the forceps, as it is astonishing the amount of decidual matter that still remains. In cases where immediate artificial abortion is required and chloroform is contra-indicated, a simple and very effective method is to push a pledget of cotton, soaked in a 4% solution of cocaine, through the internal os. After 5 minutes, rapid dilatation may be painlessly performed and the uterine contents curetted out. In infected abortions, after much experimenting, it has been found that the best results are obtained by leaving an iodoform gauze packing in the uterus for 36 hours, and then follow with a thorough flushing with hot creolin solution.

Dr. Bjornson showed a case of multiple sclerosis, and gave the following account of it :—

J. T., aged 6 years, apparently healthy at birth and throve quite normally. First illness occurred at 6 weeks, attended with fever, no medicines used ; was probably influenza, as the other people were suffering with it. Illness lasted 7 to 14 days. He cut teeth at 7 months, was weaned at 4 months, had slight summer complaint during the first summer, but nothing was noticed till he began to walk. It then appeared to them that he walked "queerly," but can not describe it exactly. What brought it to their attention was that he did not walk like other children. May have thrown feet outwards or lifted them higher. The walk was hesitating and he stumbled frequently. Between 2 and 3 years had an illness which was diagnosed as "German measles," with some lung complications.

In May last, he had what the mother supposed was influenza. Ill a few days. Following this his mother noticed that his hands often trembled. Shortly before last Christmas they noticed nystagmus on the

other eye, and the unsteadiness about the head and change of voice. During the first week in February the present trouble began in earnest. They noticed a general weakness and he seemed to them to be "queer." He grew gradually weaker, so that he could scarcely hold a knife and fork, and could not execute movements to which he was accustomed, such as hitting a nail. He also walked with difficulty at times, steadied himself by the furniture in the room. Since this, his condition has remained the same, with periods of slight improvement. Sometimes he has been able to walk unaided, as he does now; at other times he has walked only by his mother's help, or by leaning on articles of furniture. His intelligence and memory is good, and he is able to count, but his parents have not tried to teach him to read, because they have believed that his eyes were affected. Of late his temper has been very markedly passionate and he has been wilful and unmanageable, so that one is now quite unable to make any sort of an examination. His sleep has been good, but the mother has noticed restlessness and tremors and excited heart action in his sleep. Appetite good.

Typical cases are very easy to recognize, the atypical very difficult. But there is a certain combination of symptoms which, when present and taken together, make the diagnosis quite easy. The cardinal symptoms present here, on which we rely mostly, are :

1 The nystagmus. 2. The weakness and trembling of the extremities and the ataxia. 3. The difficulty in walking. 4. The intention tremor. When the patient is quiet no tremor is present, but the instant any motion is attempted it becomes marked. 5. The speech affection. This is not a typical scanning, syllabic, or slurring speech; but it is an affection of the speech and, although it is not scanning, it is peculiarly monotonous, with a marked emphasis given to the words which may almost be called staccato, and when taken in conjunction with the other symptoms may very well take the place of the typical speech affection. 6. The affection of the special senses, sight and hearing. Since early childhood he has heard badly, a common occurrence in disseminated sclerosis. The sight, too, has been affected, according to the story of the mother. This may be due to optic atrophy, or to inability to focus both eyes. In a child we have no way of determining if he sees double. 7. I am not sure about the extensor response. So far there have been no bladder symptoms, but, as a rule, they belong only to the later stages, and are sometimes absent altogether as is the case with other sphincters.

MEDICAL SOCIETIES AND GATHERINGS.

CANADIAN MEDICAL ASSOCIATION.

Provisional Programme and Papers.—1. President's Address, W. H. Morehouse, London; 2. Address in Medicine, Jas. Stewart, Montreal; 3. Address in Surgery, Alex. Hugh Ferguson, Chicago; 4. Address in Gynecology, Matthew D. Mann, Buffalo; 5. The Treatment of the Inebriate, A. M. Roseburgh, Toronto; 6. Paper (Title to be announced), Perry G. Goldsmith, Belleville; 7. Total ablation by bisecting the Uterus, T. Shaw Webster, Toronto; 8. Inguinal Hernia of an Undeveloped Uterus and Appendages with presentation of specimen, R. Ferguson, London; 9. Paper (Title to be announced), A. Lapthorne Smith, Montreal; 10. Report of two cases of Hour-Glass Contraction of the Stomach, Henry Howitt, Guelph; 11. Cardiac Affections in Influenza, E. G. Wood, Nashville; 12. Amyotrophic Lateral Sclerosis, A. McPhedran, Toronto; 13. Orthopedic Surgery at the present time, C. W. Wilson, Montreal; 14. Internal Medication for direct Remedial effect, Geo. M. Aylesworth, Collingwood; 15. The Role of Eye—Strain in Civilization and Medicine, Geo. M. Gould, Philadelphia; 16. The Inter-relations of Diabetes and other constitutional states, Geo. F. Butler, Alma, Mich.; 17. Gunshot wound of the upper arm, with non-union of humerus and destruction of musculo-spiral nerve—operation 6 months, later, Recovery, Hadley Williams, London; 18. Discussion on the treatment of Typhoid Fever—W. P. Cavan, Toronto, J. Herald, Kingston, W. B. Thistle, Toronto, H. A. McCallum, London; 19. Discussion on the Diagnosis and treatment of Tubercular Peritonitis, A. B. Atherton, Fredericton, N.B., A. Groves, Fergus, Herbert A. Bruce, Toronto, and L. Coyteux Prevost, Ottawa; 20. The Technique of Gastro-Entorostomy, Theodore A. McGraw, Detroit; 21. The relation between the general practitioner and the specialist in regard to Intra-nasal work, J. Price Brown, Toronto; 22. Personal experiences with Alexander's Operation, H. Meek, London; 23. Auto-infection, E. Hornibrook, Cherokee, Iowa; 24. The Country Doctor, J. S. Sprague, Stirling; 25. A lantern lecture on Open Air Life in the treatment of Pulmonary Tuberculosis, J. H. Elliott, Gravenhurst; 26. The size of the pupil as an aid to diagnosis, J. T. Duncan, Toronto; 27. Thrombosis of the Femeral vein following Aseptic Laparotomy, E. R. Secord, Brantford; 28. Gastro-Enterostomy with report of cases, Ingersoll Olmstead, Hamilton; 29. Radical Cure of

Hernia, A. Groves. Fergus; 30. The Decline and Fall of Atropine, G. Stirling Ryerson, Toronto; 31. The Medical Treatment of Diseases of the Nose and Throat, John Hunter, Toronto; 32. An Interesting Case, G. Herbert Burnham, Toronto; 33. Concealed Accidental Hæmorrhage, Adam H. Wright, Toronto; 34. The Surgical Treatment of Bunions by Tubby's operation, James Newell, Watford, Ont.

Railway Transportation.—Intending delegates to the 36th annual meeting of the Canadian Medical Association which will be held at London, Ont., on the 25th to the 28th of August, should take careful note of the following instructions as regards transportation rates. As a good many wrote to the General Secretary last year for forms to fill in, it might be well to state that no such forms are required. All a delegate has to do is to purchase a single first-class ticket to London, at the same time asking the agent at starting point for a *Standard Convention Certificate.* These certificates, when signed by the General Secretary, will entitle holders thereof to return fare free, providing there are 300 or more at the meeting holding *Standard Convention Certificates.* These arrangements apply as well to the wives and daughters of physicians.

Maritime Provinces.—Delegates travelling to London on the Standard Certificate plan via the Intercolonial Railway to Montreal will be given return fare free from Montreal east, provided that there are ten or more delegates in attendance at the meeting holding said certificates.

Manitoba and the Territories.—From Manitoba and the Canadian Northwest one-way tickets to be purchased to London, and Standard Certificate being secured at the time of purchase, these certificates when presented at London, duly signed by the General Secretary, will entitle the holder thereof to be returned free, if 300 or more paying railroad fare are in attendance. If less than 300 and more than 50 the same arrangements as for Ontario and Quebec, viz., one-third fare return will be in vogue. Tickets purchased West of Port Arthur, purchased in time to reach London for the Convention, will be accepted for return up to and including September 15th. Delegates taking the Superior and Huron Lake routes one way will, on presentation of certificate, be charged $4.25 extra. If Lake route is used both ways the charge will be $8.50 extra.

British Columbia.—The Canadian Pacific Railway officials at Winnipeg have not been able to make arrangements for British Columbia up to the present time. Announcement of these will be made in the daily papers of Vancouver and Victoria, if secured, some time during the first week in August.

Entertainment.—The Entertainment Committee at London proposes to entertain the visiting delegates somewhat as follows :—

On Wednesday afternoon a reception will be held at the Kennels for the visiting ladies, by the ladies of London. On the same afternoon at about 4 p.m., the members of the Association will be entertained at Springbank, London's pleasure resort. Leaving Springbank at about 5.30 p.m., the delegates will be taken to the London Asylum Grounds where they will be entertained by the Provincial Government for the balance of the evening. On Thursday, through the kindness of Messrs. Parke, Davis & Company, the Entertainment Committee have provided for an excursion to the celebrated laboratories of this extensive pharmaceutical house at Walkerville and Detroit. Arrangements have been made for a special vestibuled train to leave London at 8 a.m. sharp, Thursday. Walkerville will be reached at about 10.30 a.m., and the visit will be made to the Walkerville laboratories. The delegates will then be taken for a trip up the river, luncheon to be served on board. They will be landed at Messrs. Parke, Davis & Co's. own dock at the Detroit laboratory for the inspection of their scientific building at about 2.30 p.m. At the conclusion of this inspection other arrangements will be made for the entertainment of the members until 6.30 p.m., when a banquet will be tendered to the members of the Canadian Medical Association at the Russell House, Detroit, by Messrs. Parke, Davis & Co. Between 9.30 p.m. and 10.30 p.m., the physicians will be taken to the Brush St. depot, Detroit, and returned to London by a special train

Hotel Accommodation, etc.—During the coming meeting of the Canadian Medical Association in London, the several large hotels will be able to accommodate most of the visiting members, and in addition to this the Reception Committee having charge of receiving the visiting delegates will have lists of good boarding-houses, where those wishing them may have rooms. The Reception Committee at London hopes that no one will stay away, fearing the lack of accommodation, as the London medical men will do their utmost to make their stay agreeable. Dr. J. S. Niven, 423 Colborne St., who is chairman of the Reception Committee will be pleased to secure rooms for anyone writing for them in advance. Any one desiring any further information should address either the Local Secretary, Dr. Hadley Williams, Park Avenue, London, or the General Secretary, Dr. George Elliott, 129 John St., Toronto.

COUNCIL OF THE PHYSICIANS AND SURGEONS OF ONTARIO
38TH ANNUAL MEETING.

The first business was the election of officers, which resulted as follows :—

Dr. J. A. Robertson, Stratford, President ; Hon. Dr. Sullivan, Kingston, Vice-President ; Dr. H. Wilberforce Aikins, Toronto, Treasurer ; Dr. R. A. Pyne, Toronto, Registrar; Christopher Robinson, K.C., Solicitor ; Alex. Downey, Stenographer for college ; Dr. J. C. Patton, Toronto, Auditor ; Charles Rose, Prosecutor.

The doctors present were Dr. John L. Bray, Chatham ; Dr. John Mearns, Woodstock ; Dr. James MacArthur, London ; Dr. J. A. Robertson, Stratford ; Dr. L. Brock, Guelph ; Dr. James Henry, Orangeville ; Dr. P. Stuart, Milton ; Dr. S. H. Glasgow, Welland ; Dr. R. J. Gibson, Sault Ste. Marie ; Dr. E. E. King, Toronto ; Dr. A. A. Macdonald, Toronto ; Dr. A. H. Sangster, Port Perry ; Dr. S. C. Hillier, Bowmanville ; Dr. T. H. Thornton, Consecon ; Dr. Wm. Spankie, Wolfe Island ; Dr. J. Lane, Mallorytown ; Dr. M. O. Klotz, Ottawa ; and Dr. William Britton, representing Toronto University ; Dr. V. H. Moore, Brockville, Queen's College, Kingston ; Dr. James Thorburn, Toronto, Toronto School of Medicine ; Dr. A. J. Johnston, Toronto, Trinity College ; Hon. Dr. Sullivan, Kingston, Royal College of Physicians and Surgeons, Kingston ; Dr. J. A. Temple, Toronto, Trinity Medical College ; Dr. H. S. Griffin, Hamilton, Victoria College ; Dr. W. H. Moorehouse, Western University, London. Drs. Cl. T. Campbell, London ; G. Henderson, Strathroy ; L. Luton, St. Thomas ; E. A. P. Hardy and Edward Adams, Toronto, represented the homeopathic branch.

The following standing committees were chosen :—

Registration—Drs. Campbell, Lane, Stuart, Klotz, Johnson, Thornton and Gibson.

Rules and Regulations—Drs. Lane, Mearns, Spankie, Adams and Hillier.

Finance—Drs. Henderson, King, Griffin, MacArthur and Brock.

Printing—Drs. Macdonald, King, Stuart, Hardy and Thorburn.

Education—Drs Moorehouse, Macdonald, Moore, Henry, Spankie. Britton, Luton, Bray and Temple.

Property—Drs. Thorburn, Thornton, Britton, Glasgow and Campbell.

Complaints—Drs. Griffin, Glasgow, Brock, Johnston and Sangster.

The following were elected members of the Discipline Committee :—

Dr. J. L. Bray, Chatham ; Dr. V H. Moore, Brockville ; Dr. C. T. Campbell, London, and Dr. A. A. Macdonald, Toronto.

The case of Dr. J. Moore Connerty of Smith's Falls excited a lively discussion at the morning's session. Dr. Connerty some time ago was charged with a serious offence, although he declared that he had committed no offence whatever. An application was made to have the practitioner's name stricken from the rolls, and the Discipline Committee of the Council made an investigation, with the result that the evidence of the woman who made the complaint against Dr. Connerty was proved to be unworthy of credence. The committee reported that the charges against the practitioner had not been proven. The report of the Committee was adopted.

Dr. V. H. Moore reported that in Ottawa he had presented Sir Frederick Borden with the engrossed letter containing the congratulations of the council to Sir Frederick on his elevation.

A committee was appointed to prepare a minimum and maximum tariff, and a report will be received and considered at the next meeting. The registration fee was again fixed at $2.

The matter of non-professional education was discussed, and the question was referred to a committee consisting of Drs. Macdonald, Spankie and Britton.

The special Committee on Legislation brought in a voluminous report in the afternoon, suggesting amendments to the Medical Act, which would benefit both the public and the profession. "The practice of medicine should be more clearly defined. Many judicial opinions have been given based upon the idea that medical practice in every case necessarily involves the administration of drugs, whereas it is recognized by all physicians that cases of disease are constantly occurring where hygiene, mechanical processes, mental suggestion, etc., either singly or combined, are the most important elements in therapeutics. A man who undertakes to cure a sick person by any method whatever, whether with or without drugs, is undertaking to practice medicine. And if he does so for hire, gain or the hope of reward he comes under the provisions of the Medical Act, and the language of the act should be clear.

"The main object of the law is to secure for the public qualified practitioners. No man should be allowed to treat sick people unless there is some evidence that he knows what he is doing; that he understands the condition, both in health and disease, of the body he is treating. Knowing this, the method of treating the disease is one for him to decide by his own judgment and settle with his own conscience. Methods of treatment are seldom fit subjects for legislative restrictions. The educational qualifications of would-be practitioners always are.

"Counter prescribing by druggists, who undertake to advise their customers as to what proprietary articles or medical prescriptions are

best suited for their ailments, is not only unfair to druggists' customers, but it is unfair to the physician, who often finds his prescription duplicated to some of the druggist's customers, but it is unfair to the customers as well, for whom the druggist not only diagnoses but prescribes. Regarding patent medicines containing not only large quantities of alcohol, but sometimes poisonous doses of drugs, the public would be benefited if every bottle or package was labelled with the formula, or, at all events, with the names of the constituent substances."

The report then stated that, while it would be advisable if these amendments were made, the committee did not think it would be proper or expedient for the Medical Council to urge the passage of legislation, which action might lead unthinking people to say it was done from selfish motives. At the same time there could be no objection to the Medical Council, as the representatives of the profession, calling the attention of the Legislature to these evils; therefore the committee recommended that the Executive Committee of the council lay before the leading members of the Legislature the views above indicated.

The Executive Committee reported that the proper interpretation of section one of the regulations for 1902-3 respecting matriculation is:—"That by regulation number two of said section the requirement for matriculation has been declared to be a certificate of passing the senior matriculation examination as therein set forth, and that in addition thereto and by regulation No 1 of the said regulations it is provided that any person who presents a certificate of having passed what is known as the junior matriculation examination in arts, including chemistry and physics, taking honors in any one subject thereof, may be registered as a matriculated student in the register of the said college. And that section one of the said regulations of 1902-3 be not regarded as coming into force, and be not in force during the year 1903."

The application of a Bachelor of Science of Wisconsin University for standing in Ontario as a matriculant was granted.

Medical students who served in the war in South Africa were given time allowance for the period they were absent. The requests of the following for registration were granted:—Samuel G. Higgins, D. M. King, D. F. McKinley, Frank McTavish, George C. Ferrier, Fred. J. Morrow, James L. Biggar.

The applications of the following were not granted:—Dr. A A. Walker, Dr. R. O. Van Epp, Miss Laura McLaren, W. E. McLean, Richard Shaughnessy, J. A. Gallagher, E. M. Middleton, Hugh A. Cameron, C. M. Wagar, R. K. Lenfesty and Donald Munroe.

The following requests were withheld for consideration or compliance with conditions :—H. E. Service, Taylor Chamberlain, George E. McKenzie, Harold Craig, E. A. Ferguson.

The committee decided not to accept the Military College entrance examination as a medical matriculation.

LICENTIATES OF THE COLLEGE OF PHYICIANS AND SURGEONS, ONTARIO.

The following have passed the final examination :—

A. H. Anderson, S. W. Arthur, D. M. Allison, G. H. L. Armstrong G. M. Atkin, A. E. Archer, A. Brown, J. M. Baldwin, C. T. Ballantyne, J. B. Buel, E. Brandon, J. C. Connell, C. Carswell, J. Campbell, Annie Davis, A. Fisher, G. W. Fletcher, C. W. Freeman, R. F. Foster, J. S. Graham, J. E. Godfrey, W. Alex. Graham, E. A. Gray, W. J. Harris, H. R. Hutton, E. T. Hoidge, R. W. Irving, E. P. James, C. A. Jones, L. W. Jones, O. Klotz, H. Labrosse, J. H. Laidlaw, F. E. Mellow, W. A. Meighen, W. S. Murphy, G. E. L. MacKinnon, C. H. Montgomery, N. T. MacLaurin, A. Moir, A. R. Mitchell, A. D. McEachern, G. McNeill, Elizabeth McMaster, H. N. McCordick, D. McBane, H. McGougan, W. A. McCauley, T. O. McLaren, C. G. McGreer, C. H. McDougall, H. O'Neill, W. J. Patterson, J. E. R. Parry, R. M. Reid, J. W. Russell, R. W. Rutherford, D. A. Sinclair, E. G. Smith, C. M. Stratton, A. G. Smith, L. L. Stauffer, D. Smith, H. J. Sullivan, A. S. Thompson, G. A. Winters, G. S. Wray, T. W. Walker, E. M. Walker, J. M. Waters, A. B. Wright, W. T. Wallace, C. A. A. Warren.

COLLEGE OF PHYSICIANS AND SURGEONS, QUEBEC.

The following are qualified to practice medicine in the Province of Quebec :—

Jos. A. Isabella, Desire Houde, Hector Viau, Abl. Geo. Macauley, Norman Strong, Edgar Smith, Jos. Geo. Larue, Jos. F. Belleau, J. B. R. Page, Thomas Herbert, A. Hector Desloges, E. P. Grenier, H. F. Duchaine, J. Edouard Masson, Jos. P. Dobbin, Jos. E. Cloutier, J. E. Cloutier, Olivier Demers, E. Herbert Martel, J. Hormisdas Larose, Wilfrid Tetreault, Honore Meunier, Joseph Guertin, Z. Jos. Ouimet, Georges Cote, Wm. Ouimet, Wm. Ernest Nelson, P. Edouard Riopelle, Louis P. Dorval, Fred. Charles Douglas, L. Melville Dechene, Jos. Garon, Herbert M. Little, Ed. A. Mitchell, S. W. Laroche, Jos. H. Lapointe, Jos. P. Laporte, John P. Brennan, Hector Aubrey, Horatio Walker, Jos. N. Landry, Albert Larose, Wilfrid Monette, Louis F. Beauchamp.

OPENING OF NEW UNIVERSITY MEDICAL BUILDINGS, TORONTO.

The new university buildings for physiology, pathology, medicine and surgery are now being prepared for occupation next month by the various departments concerned, and the formal opening will take place on October 1. The inaugural proceedings promise to be of very great interest, and a number of distinguished teachers in physiology, pathology, medicine and surgery have already accepted the invitation to be present and deliver special addresses. Amongst these may be mentioned Prof. C. S. Sherrington, F.R.S., of the University of Liverpool, a physiologist of the first rank; Professor Wm. Osler, of Johns Hopkins University; Professor Welch, also of Johns Hopkins University, the leading American pathologist; Professor Keen, of Philadelphia; Professor C. S. Minot, of Harvard University, and Professor Bowditch, also of Harvard, the veteran American physiologist. Professor Sherrington is coming from Liverpool specially for the occasion. It is expected that all the leading universities of the United States will be represented by delegates.

The occasion is, from another aspect, to be a notable one, for it is to formally inaugurate the united or amalgamated medical faculties, and henceforth, with the exception of the Medical College for Women, there is to be but one medical teaching institution, and that only as the medical faculty of the University of Toronto. It is exactly fifty years ago that the first medical faculty of the University of Toronto was abolished by act of Parliament. The new situation is certain to make Toronto one of the few great centres of medical education on this continent.

UNIVERSITY FEDERATION.

On 10th July the Ontario Cabinet received a deputation consisting of Rev. T. C. Street Macklem, Vice-Chancellor, and Mr. J. A. Worrell K.C., representing Trinity University; President Loudon and Chancellor Burwash of Victoria University, and Mr. B. E. Walker, representing the University of Toronto, which laid before the Government a scheme for the federation of the two universities. The meeting was private, but at the close Premier Ross gave out the following statement on the subject. He said the deputation presented a confidential document, which outlined a plan of federation reasonable and fair to all parties concerned, and which he hoped would be acceptable to all.

The members of the deputation, whilst expressing confidence in the early union of the two universities, stated that the document submitted

to the Government was to be considered confidential until it had once more been laid before all concerned.

From the Premier's declaration that the scheme proposed is fair and reasonable, it is safe to infer that it recommends itself to the Government, so that if the governing body of each university approve, federation will follow immediately. Rev. T. C. Street-Macklam expressed the hope that the medical schools would open as a united body this next session and that the same might be the case with the universities.

In the scheme of confederation with the University of Toronto, as formally adopted by the corporation of Trinity University, Trinity holds in abeyance its university powers, but gives over Trinity Medical School to Toronto University, and all university fees for degrees, matriculation, etc.

In return, Trinity secures free access for all its students to Toronto University lectures, and has the university lectures on all pass subjects duplicated or repeated at Trinity. For higher mathematics and science Trinity men will have to go to the Toronto University lecture rooms.

The plan of federation submitted to the corporation of Trinity was prepared by a committee composed of the trustees of the University of Toronto and the federation commissioners of Trinity. It therefore, represents the views of the University of Toronto, and its adoption by Trinity renders confederation an accomplished fact. (Since writing the above, all arrangements have been completed.)

GOVERNORS, COLLEGE PHYSICIANS AND SURGEONS, QUEBEC.

The semi-annual meeting of the governors of the College of Physicians and Surgeons of the Province of Quebec, opened 7th July, in Laval University. Dr. E. P. Lachapelle presided, the other principal officials present being Dr. Craik, vice-president; Dr. Jobin, Quebec, treasurer; Dr. Marsolais, registrar; Dr. J. A. McDonald, Montreal secretary; Dr. Charles Marshall, Huntingdon; Dr. George H. Boon, Montreal; S. Lafleur, Montreal; Dr. F. W. Campbell, Montreal; Dr. Seymour, Dr. Brophy, Dr. Cattellier, Quebec. Before the meeting adjourned it was decided to hold the next meeting in Quebec, at the latter part of September.

ADDRESS TO Dr. W. B. GEIKIE.

We, the Corporation of Trinity Medical College, in accepting the resignation of Dr. Walter B. Geikie, D. C. L., F. R. C. S E., L. R. C. P., Lond., Dean of the Faculty, and Professor of the Principles and Practice of Medicine, desire to place on record our sense of the debt of gratitude owing to our late associate, for his two and thirty years of earnest and self-sacrificing labour on behalf of the college. At all times, in season and out of season, by night and by day, year after year, the cause of Trinity Medical College has ever been foremost in his thoughts and the one object around which his affections centered.

With every energy and faculty he possessed, Dr. Geikie laboured to promote what he considered the best interests of the college which was so dear to his heart, and owing in a large degree to these unwearied efforts, Trinity Medical College has attained her present proud position.

It is with feelings of regret that the corporation parts with him who is the father in medicine of most of its members, who has presided over its meetings, and piloted its ship through so many breakers, and we one and all desire that Dr. Geikie may be spared for many years to enjoy the satisfaction of well-earned repose.

Engrossed and signed by all the members of the corporation.

J. A. Temple, F. L. Grasett, W. T. Stuart, Charles Sheard, G. Sterling Ryerson, Luke Teskey, John L. Davison, G. A. Bingham, N. A. Powell, and D. J. Gibb Wishart.

Dated June 14th, 1903.

TRINITY UNIVERSITY COLLEGE.

To the Graduates and Under-Graduates in Medicine of Trinity University and to all Students of Trinity Medical College.

Gentlemen:—It is important that you should have a clear understanding of what steps have been taken by the authorities of the College and University towards the Federation of Trinity University with the University of Toronto, and the amalgamation of the two Medical Faculties, and how such arrangements will effect those at present registered as students of Trinity Medical College.

With this object in view we have much pleasure in submitting to you the following statement, by which you will see that your interests have been carefully and zealously conserved, and that provision has been made for the completion of your medical course under the most favourable auspices.

As announced at the medical convocation last May, arrangements were concluded whereby the Faculty of Trinity Medical College became the Medical Faculty of Trinity University. One important feature of the changes proposed in this connection was the erection of new buildings adjoining the present Trinity Medical College. While the details of this proposal were being worked out it was strongly urged upon the authorities of the Medical College and of the University that the interests of all medical students in Toronto, both present and future, would be better served by co-operation with the Medical Faculty of the Provincial University than by the perpetuation of two rival institutions in Medicine. It was pointed out further that the erection of the proposed building would necessarily mean the indefinite postponement of such co-operation to the disadvantage of medical education generally and the weakening of both institutions. Accordingly the plans which had been commenced were postponed pending the full discussion of this important question, the result being an almost unanimous decision in favour of co-operation and the acceptance of the draft appended hereto for an Amalgamated Faculty in Medicine in which provision is made for every member of both faculties with the exception of the former Dean of Trinity Medical College, who resigned his position during the course of these negotiations. We desire to take this opportunity of expressing our warm appreciation of the long, faithful and valuable services of Dr. Geikie, who has been such a power for good in our Medical College during the past thirty-three years. In this expression of appreciation we are sure every student of the college will join most heartily.

By reference to the sub-joined list of the proposed Amalgamated Faculty you will at once see what excellent provision has been made for advancing the best interests of medical education in Toronto. It is generally acknowledged that such a Faculty, possessing as it does ability, strength and efficiency in medical teaching, will render signal service to the entire medical profession of the Province, and we confidently anticipate that under the new conditions now created Toronto will more than ever occupy a proud and leading position among the educational centres of this Dominion and Continent.

When not only the strength and efficiency of the new Amalgamated Faculty is considered, but also the excellent and ample provision for all branches of medical teaching in the now completed new medical buildings of the University of Toronto, and we reflect that before our new buildings could have been erected and equipped (in view more especially of the delay necessarily incident to the unsettled conditions of the labour market) most of the present students of Trinity Medical College

would have been far advanced in their course, we feel confident that they will frankly recognize that their best interests have been served by the arrangements outlined in this letter.

As bearing more particularly upon the status of matriculants and the rights of non-matriculated students of Trinity Medical College, we beg to draw attention to the following provisions.

"The non-matriculated students of Trinity Medical College shall be allowed two years from the date of Federation for matriculating in Trinity University, under the regulations in force in that University at the time of Federation."

These who have already matriculated, as well as those matriculating within the time specified above, will have the option of either proceeding to the degree of M. D., C. M., of Trinity University, on the conditions under which they entered, or proceeding to an M. D. degree in the following year if desired, from the Provincial University. In both instances students will attend and receive lectures from the Amalgamated Faculty.

All graduates in medicine of Trinity University will be enrolled in the Provincial University, and their names will appear in the various calendars with their degrees designated.

As defining more clearly the status of Graduates and Under-Graduates under Federation, we quote the following extract from the Articles of Agreement.

"All Graduates and Under-Graduates of Trinity University excepting those in Theology, are, from and after the date of Federation, to have and enjoy the same degrees, honours and status in the University of Toronto as they previously held in Trinity University, and shall be entitled, subject to the provisions of the University Act of 1901, to all the rights and privileges pertaining to such degrees and status so long as such Federation continues."

The Fellowship of Trinity Medical College, (as the Medical Faculty of Trinity University) will be granted to such students as are now enrolled in Trinity Medical College upon their complying with the requirements and passing the examinations necessary to entitle them to receive such fellowship.

The Corporations of Trinity Medical College and Trinity University wish their Graduates and Under-Graduates to be clear upon the point that their interests, both now and for all time, have been most carefully safeguarded and they will enjoy the same rights and privileges in the Provincial University, of which Institution each one of them will under Federation form an integral part, that they do now enjoy and have heretofore enjoyed as students and Graduates of Trinity University.

It is highly desirable that the students who have been in attendance at Trinity Medical College should register their names with Dr. Primrose, the Secretary of the Medical Faculty, Biological Department, Queen's Park, Toronto, at as early a date as possible, as seats in the Lecture Theatres are assigned according to priorty of the date of registration.

No fee will be required from students in the Third and Fourth Years. Students of the Second Year will require to make a locker deposit of $2.00 and those of the First Year, the registration fee of $5.00 in addition to the locker deposit.

Signed on behalf of Trinity University :—

T. C. S. MACKLEM, Vice-Chancellor.

Signed on behalf of Trinity Medical College :—

J. A. TEMPLE, Dean.
CHAS. SHEARD, Treasurer.
D. J. GIBB WISHART, Secretary.

Toronto, 27th July, 1903.

PROFESSORS, LECTURERS AND DEMONSTRATORS.

Anatomy.

Professor and Director of the Anatomical Department: A. Primrose, M. D., C. M., Edin.

Associate-Professor : H. Wilberforce Aikins, B.A., M.B., Tor.

Demonstrator : C. B. Shuttleworth, M.D., C.M., Trin., F.R.C.S., Eng.

Assistant-Demonstrators: W. J. McCollum, M.B., Tor.; W. J. C. Malloch, B. A., M. B., Tor.; T. B. Richardson, M. D., C. M., Trin.; F. R. C. S., Edin.; George Elliott, M. D., C. M., Trin.; C. P. Lusk, M. D., C. M., Trin.; S. W. Westman, M. B., Tor.; E. S. Ryerson, M. D., C. M., Trin.; E. R. Hooper, B. A., M. B., Tor.; W. J. Wilson, M.B., Tor,; A. C. Hendrick, M. A., M.B., Tor.; A. J. MacKenzie, B. A., L L. S., M. B., Tor.; D. McGillivray, M. B., Tor.

Surgery.

Professors of Surgery and Clinical Surgery : I. H. Cameron, M.B., Tor., F.R.C.S., Eng.; F. LeM. Grasett, M.B., C.M., F.R.C.S. Edin; G. A. Peters, M. B., F. R. C. S., Eng.; L. Teskey, M. D., C. M., Trin.

Associate-Professor of Clinical Surgery and Clinical Anatomy : G. A. Bingham, M.D., C.M., Trin., M.B., Tor.

Associate-Professors of Clinical Surgery : A. Primrose, M. B., C. M., Edin.; N. A. Powell, M.D., C.M., Trin., M.D., Bellevue, N.Y.; W. Oldright, M.A., M.D., Tor.; H. A. Bruce, M. B., Tor., F.R.C.S.; F. N. G. Starr, M.B., Tor.

Associate-Professor of Clinical Surgery, in charge of Orthopædics: C. L. Starr, M.B., Tor.

Demonstrators of Clinical Surgery: W. McKeown, B.A., M.B., Tor.; C. A. Temple, M.D., C.M., Trin.; A. H. Garratt, M. D., C. M., Trin.; C. B. Shuttleworth, M. D., C. M., Trin., F. R. C. S., Eng.; T. B. Richardson, M. D., C.M., Trin., F.R.C.S. Edin.; J. F. Uren, M.D., C.M., Trin.

Pathology.

Professor of Pathology and Bacteriology, and Curator of the Museum and Laboratories: J. J. MacKenzie, B.A., M.B., Tor.

Professor of Clinical Pathology: H. B. Anderson, M.D., C.M., Trin.

Associate-Professor of Pathology and Bacteriology: J. A. Amyot, M.B., Tor.

Laboratory-Assistant in Bacteriology: T. D. Archibald, M.B., Tor.

Demonstrators: G. Silverthorn, M.B., Tor.; C. J. Wagner, M.B., Tor.

Assistant-Demonstrators: W. H. Pepler, M.D., C.M., Trin.; H. C. Parsons, B.A., M.D., C.M., Trin.; M. M. Crawford, M.B., Tor.; F. A. Clarkson, M.B., Tor.

Medicine.

Professor of Medicine and Clinical Medicine: A. McPhedran, M.B., Tor.

Associate-Professors of Medicine: J. T. Fotheringham, B.A., Tor., M.D., C.M., Trin.; R. D. Rudolf, M.D., C.M., Edin., M.R.C.P., Lond.

Professor of Clinical Medicine: J. L. Davison, B.A., Tor., M.D., C.M., Trin.

Associate Professors of Clinical Medicine: A. M. Baines, M.D., C.M., Trin; W. P. Caven, M.B., Tor.; W. B. Thistle, M.B., Tor.; J. T. Fotheringham, B.A., Tor., M.D., C.M.. Trin.; A. R. Gordon, M.B., Tor.; R. J. Dwyer, M.B., Tor., M.R.C.P., Lond.; H. B. Anderson, M.D., C.M., Trin.

Associates in Clinical Medicine; G. Boyd, B.A., M.B., Tor.; R. D. Rudolf, M.D., C.M., Edin., M.R.C.P., Lond.; G. Chambers, B.A., M.B., Tor.; F. Fenton, M.D., C.M., Trin.; H. C. Parsons, B.A., M.D., C.M., Trin.; W. Goldie, M.B., Tor.

Preventive Medicine.

Professor of Preventive Medicine, Didactic and Clinical: C. Sheard, M.D., C.M., Trin.

Materia Medica and Therapeutics.

Professor of Materia Medica, Pharmacology and Therapeutics: J. M. MacCallum, B.A., M.B., Tor.

Obstetrics and Gynæcology.

Professor of Operative Obstetrics and Gynæcology: J. A. Temple, M.D., C.M., McGill.

Professor of Obstetrics: A. H. Wright, B.A., M.B., Tor.

Professor of Gynæcology: J. F. W. Ross, M.B., Tor.

Associate-Professor of Obstetrics and Pediatrics: H. T. Machell, M.B., Tor.

Associate-Professor of Pediatrics: A. M. Baines, M.D., C.M., Trin.

Associates in Obstetrics: K. C. McIlwraith, M.B., Tor.; F. Fenton, M.D., C.M., Trin.

Ophthalmology and Otology.

Professors: R. A. Reeve, B.A., M.B., LL.D., Tor; G. S. Ryerson, M.D., C.M., Trin; G. H. Burnham, M.D., Tor., F.R.C.S., Edin.

Associates: C. Trow, M.D., C.M., Trin; J. M. MacCallum, B.A., M.B., Tor.

Laryngology and Rhinology.

Professor: G. R. McDonagh, M.B., Tor.

Associate-Professor: Dr. J. Gibb Wishart, B.A., Tor.. M.D., C.M., McGill.

Associate: G. Boyd, B.A., M.B., Tor.

Hygiene.

Professor: W. Oldright, M.A., M.B., Tor.

Toxicology.

Professor: W. H. Ellis, M.A., M.B., Tor.

Medical Jurisprudence.

Professor: N. A. Powell, M.D., C.M., Trin., M.D., Bellevue, N.Y.

Mental Diseases.

Extra-Mural Professors: N. H. Beemer, M.B., Tor.; J. C. Mitchell, M.D., C.M., Trin.

Chemistry.

Associate-Professor: W. T. Stuart, M.D., C.M Trin., M.B., Tor.

Biology and Physics.

(As in Calendar.)

THE CANADA LANCET

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EDITORIAL.

THE FEDERATION OF TRINITY AND TORONTO UNIVERSITIES.

Many will hail with delight the announcement that these universities have at last decided to unite their forces. Some years ago Victoria University joined with the University of Toronto. There are few indeed who would now be bold enough to wish that union dissolved. In the interests of higher education, it was a boon to the public. When Trinity University has joined with the University of Toronto, the results to the best interests of education will be increased manifold.

But what medical men are most deeply interested in, is the amalgamation of the two medical schools. For many years, Toronto School of Medicine and Trinity Medical College did most of the work of educating the medical students of Ontario.

A great change came in 1887, when the Toronto School of Medicine gave up her charter, and the Medical Faculty of the University of Toronto was restored. And now comes another great step onwards, in that Trinity Medical College also comes under the broad branches of the Provincial University's emblematic tree. *Velut arbor crescat concordia.*

There are many who can look back—and with pride, too—to the days when the letters "T. M. C." and "T. S. M." adorned the escutcheons of the two schools. Those were days of noble teachers for the opportunities they had. But, while we can admire the record of the past, and honor those who did so much to make it what it was, let us look forward into the future with a large hope, for it has yet to tell its tale.

There are some who think that two medical colleges in competition with each other would achieve most for medical education in this Province. We think otherwise. The efforts and money expended in the maintenance of two colleges, will do far more, and far better work, if they are poured into one college. The competition created by the two colleges will be far more than offset by the stimulus of the larger college and the healthy rivalry of its various chairs.

Toronto will, after the union, take its true place as a centre of medical education. The money that has gone, in the past, to maintain

two colleges, will then go to maintain one college. This will bring the day nearer to hand when the purely scientific chairs shall be endowed, and their encumbents paid such a salary as will entirely free them from the cares of practice. It is when that day comes that the new era for medical education, in Ontario, will have dawned, with all its lustre. Medical education in Toronto will then travel, not *longo intervallo*, but *equo pede* with the medical departments of Harvard, the University of Pennsylvania, and Johns Hopkins. *Sperate, et vosmet rebus servate secundis.*

THE ONTARIO MEDICAL COUNCIL.

The annual meeting this year was a rather quiet one. There were, however, some matter of present and future importance up for consideration.

One of these was the case of Dr. J. M. Connerty. In this case we think the Council acted wisely in disregarding doubtful evidence, and also in sustaining the report of its own committee. We congratulate Dr. Connerty in being able to vindicate himself so fully in the matter of the accusation against him

Another matter of some importance is that of the standard of fees. It seems quite clear that there cannot be a common standard for all parts of the Province. There are local conditions that will require to be considered. There are difficulties to be met, but no doubt they can be overcome, and a scale of fees drawn up that could be made applicable to the various parts of the Province. It is a subject well worth the attention of the Council.

Irregular forms of practice came in for some consideration. There are refractionists, osteopaths, electricians, x-rayists, manicurists, Christian scientists, *et al.* It is perfectly apparent that something ought to be done with all these. It is all very well to declaim about the liberty of the subject, and his right to be treated in any way he choose; but there is a limit to the right granted to persons to do, or to pretend to do, what they have no knowledge to enable them to do in the interests of those who may consult them. It is absolutely wrong for the state to permit anyone to buy an x-ray apparatus and commence the treatment of disease, until such person has taken a course of medical study, and become qualified as a medical practitioner. The same is true of the rubbing, and the flexion and extension of stiff joints, as we encounter in osteopathy. So many cases of joint disease depend upon constitutional conditions, or on the presence of tuberculosis, that none but the compe-

tent practitioner should be allowed to take charge of such cases. But what shall be said of the refractionist! Without the slightest knowledge of the anatomy or physiology of the age, or the local or general diseases that may affect the sight, he secures a test set and goes to work to prescribe glasses. Then again we have the Christian scientist who teaches that there is no such thing as disease, that it is all a delusion of mortal mind. Infection has no existence outside of one's thought. This is Berkeleyism gone mad. There need be no interference with those who care to hold such absurd views, but there should be the most effectual interference with them in any attempt to treat others on such a system. This is really not interfering with liberty, but protecting the subject against imposture. This is one of the most sacred duties of the state.

The Council had up the matter of the medical curriculum. This question was referred to a committee, to report at the meeting a year hence. It is well to move slowly just now. Medical education is passing through important changes. It is not well to be altering the standard often; and it is better to take time now, and reach findings that are more likely to be lasting than if too hurriedly disposed of. One thing however, is apparent to all. The fifth year, as it is now inforced, is not yielding satisfactory results. It would be much better to make it a regular year of academic study of a practical character than to leave it as it is.

THE RETIREMENT OF DR. W. B. GEIKIE.

Inter homines sapiens, inter sapientes medicus—among men a wise man, among the wise men the doctor—are words that are peculiarly appropriate to Dr. W. B. Geikie, who has occupied so prominent a position in the medical affairs of the country, and particularly of the Province of Ontario, for nearly fifty years. Of those who took a prominent part in the establishment of medical colleges in this country, none stood higher, nor figured more largely before the public eye, than did Dr. Geikie. Of the old guard, he is the last to lay down the reins of office, and seek the quiet of well earned repose from arduous public duties. Drs. Rolph, Hodder, Aikins, Barrett, Bethune, and some others have joined the great majority; Drs. Richardson and Uzziel Ogden resigned their chairs a short time ago, and now comes the adieu to medical teaching of Dr. Geikie.

Fifty years ago, when the Province was thinly settled and poor, and when Toronto was small and unimportant, it required great courage

and unbounded faith to undertake the heavy task of founding colleges for the higher education of the young men of the country. Among the brave men of that period, who turned their faces with hope to the future, was the subject of these remarks. As years went by, Dr. Geikie's work grew in importance, and his share in medical education increased, until it might truly be said in the words of Virgil, *magna pars fuit.* In those early days of medical education it must have been a great pleasure to have felt the pulse waves of hope quicken and inspire thought and action; now it must be a far greater pleasure to look back over those years in the quiet contemplation of how much has been accomplished and how well it has been done.

There have been not a few who have differed from Dr. Geikie; but this is ever true of men of strength of character. His character is of the positive type. He was always true to his convictions—believing that the greatest loyalty is loyalty to one's self. Had he not been forceful and resourceful, what he accomplished for higher medical education would have remained unwritten history, and a long and important chapter would have no place in the records of this country. Dr. Geikie was hopeful, courageous, honorable and scholarly; and he freely gave these gifts for the benefit of others, making his influence widely felt and long enduring. His life's work as a good citizen, an able practitioner, a wise teacher, and his thousands of pupils scattered over the world are his monument; and the words said of Sir Christopher Wren can also be said of Dr. Geikie, *si monumentum requiris, circumspice.*

Dr. Geikie and Trinity Medical College are inseparable words. He began teaching in Victoria College in 1856. In 1871, along with others, he reorganized Trinity Medical College, which had been discontinued for some years. In 1878 he became the Dean of the Medical Faculty, a position which he held continuously until his resignation, a few weeks ago. During the many years of his teaching career, he held, at various times, the chairs of Anatomy, Materia Medica and Therapeutics, Obstetrics and the Practice of Medicine.

Dr. Geikie belongs to a well-known family. His brother was Rev. Dr. Cunningham Geikie, the famous Biblical scholar; and Archibald and James Geikie, the eminent geologists, are his cousins. In addition to his Canadian degrees, he holds the L.R.C.P. of London, and the F.R.C.S. of Edinburgh.

Although Dr. Geikie is turning his face towards the west, we hope that the sun is still high in the second half of its course. We sincerely wish for him many years of health and happiness. *Detur aliquando otium quiesque.*

Dr. A. J. JOHNSON'S APPOINTMENT.

At the recent session of the Ontario Legislature, a bill was passed creating the office of a chief coroner for Toronto. This we approve of, as Toronto has now a large population, and is the scene of many such accidents and deaths as fall to the lot of a coroner to investigate. Dr. Johnson has had much experience as a coroner, and will be able to discharge the duties of the office with satisfaction to the public. We congratulate Dr. Johnson and wish him every success.

PERSONAL AND NEWS ITEMS.

Dr. W. A. Meighen has located in Perth.

Dr. W. E. Dean is leaving Tillsonburg to locate in Millbrook.

Dr. Brereton, of Barrie, and Miss Davis were married July 14.

Dr. and Mrs. McLachlan, of Carman, Man., are on a trip to Europe.

Dr. J. Leslie, of Toronto, has returned from a pleasant trip to England.

Dr. J. E. Brown, of Forest, has sold his practice to Dr. Hauffman, of Aylmer.

Dr. King, of Staples, has removed to Windsor and will start practice there.

Dr. T. F. Campbell, of Galt, and Miss McDougall, of Trafalgar, were married 24th June.

Dr. W. A. Graham has been appointed house surgeon to Toronto Western Hospital.

Dr. S. E. Fleming and Miss Dunkin, both of Sault St. Marie, were recently married.

Dr. Smith, of Star, has sold his practice and residence to Dr. Archer, a new arrival.

Professor James Stewart is ill and confined to his bed in the Royal Victoria Hospital, Montreal.

Dr. McColl, of Wallacetown, has been appointed house surgeon to the Sarnia General Hospital.

Dr. E. G. Cooper, of Calabogie, was married on June 30th, to Miss Mary McIntyre, of Balderson.

Dr. Wm. Edward Metcalfe, of Portage la Prairie, Man., was married 17th June, to Miss Adams.

Dr. F. G. Glendenning, of Malvern, and Miss Lillico, of Agincourt, were married 24th June.

Dr. D. R. Dunlop, of Shallow Lake, and Miss Cook, of Fordwich, were married 3rd July.

Dr. Murray, son of the late Judge Murray, died in Montreal recently, in his 65th year.

Dr. Ed. Gallie has been appointed to the position of house surgeon, Hospital for Sick Children, Toronto.

Dr. A. R. B. Williamson, of Kingston, and Miss Norma Tandy, of Havelock, were married 29th June.

Dr. R. L. Langstaff, of Richmond Hill, was married July 15, to Miss. Carroll, of Freemont, Nebraska.

Dr. J. L. Carter, of Winnipeg, has gone to Boissevain, and has secured the office lately occupied by Dr. Cutten.

Dr. McRury, of Portage la Prairie, has disposed of his practice to Dr. Clarke, late of the Winnipeg hospital staff.

Dr. Hunter Cowperthwaite since graduating has been appointed house surgeon in the Montreal General Hospital.

Dr. Edward Taggart, has received the appointment of assistant house surgeon at St. Luke's Hospital, Ottawa.

Dr. R. G. Moore has been appointed house surgeon of the Norwegian Lutheran Deaconess Home and Hospital in Brooklyn.

Dr. W. J. Neilson, M.P.P. for North Winnipeg, died July 16th. He was a very prominent physician in Winnipeg and the west.

Dr. G. H. Bowlby and Mrs. Bowlby, of Berlin, have gone for a trip abroad. On his return he will locate in Toronto.

Dr. William Robinson, of Oakville, and formerly of Chelsea, Michigan, has gone to New York for post graduate study.

Dr. R. W. Rutherford, C. A. Warren, and G. E. Wilson, have been appointed house surgeons to Grace Hospital, Toronto.

Dr. John B. Leeson, of Brandon, Man., was united in marriage to Miss Hunter, late superintendent of the Brandon Hospital.

Dr. E. C. Chandler, son of Professor Chandler of McGill University, was recently married at "The Maples," Caledonia, to Miss Moses.

Dr. C. D. Wartman, of Napanee, died on 1st July, in his 60th year. He was of U.E.L. stock. He practiced in Napanee for twenty years.

Dr. Francis Dixon, brother of Prof. Dixon, of Dalhousie University has been appointed to the chair of anatomy, Trinity College, Dublin.

Dr. H. McCordic has decided to locate in Forest. Dr. McCordic was a member of the staff of the Sarnia General Hospital.

Dr. R. S. Macalpin, Petrolia, having completed a post graduate course in New York, will resume practice on the 1st August.

Dr. V. E. Latimer, late of Holland, Man., has moved to Brandon, and will practice there as eye, ear, nose and throat specialist.

Dr. Sparks, of Stratford, met with a painful accident recently, by his horse taking fright and throwing the doctor from his buggy.

Dr. A. G. Young was married on Wednesday, June 24th, to Miss N. F. Sutherland, of Almonte. They will reside in Merrickville.

Dr. E. M. Meadows, of Oberon, North Dakota, and formerly of Thamesford, was united in marriage to Miss Woodhall, 16th June.

Dr. Frank McTavish, of Ridgetown, and recently returned from South Africa and England was married on July 15 to Miss Brown.

The marriage of Dr. Robert Law, city medical officer, Ottawa, and Miss Elizabeth Burns, of Grenville, took place at Grenville on 24th June.

Dr. James Harvey Paul and Miss Susie Decew MacDiarmid were married at Lindsay, at the residence of Mr. G. A. MacDiarmid, a cousin of the bride, on Tuesday, 23rd June.

The marriage of Miss Audrey Blair, daughter of Hon. A. G. Blair, minister of railways, to Dr. G. S. MacCarthy, was quietly celebrated at the residence of the bride's father, Ottawa.

Dr. McBrien died recently at the residence of his son in East St. Louis, Mo. For a great many years the doctor was a highly respected resident of Oshawa where he practiced his profession successfully.

Dr. MacLaurin, on retiring from the position of house surgeon of the Home for Incurables, was presented with a dressing-suit case and a gold-headed stick by the officers of the institution. Mrs. Bowman, the matron, read the address accompanying the gifts, and Miss Allison, the head nurse, made the presentation.

The following doctors have been appointed to the house staff of St. Michael's Hospital for the ensuing year:—Dr. F. J. Doherty of last year's staff, Dr. H. J. Sullivan and Dr. Baldwin. Drs. C. H. McKenna and Marlow have been appointed assistant surgeons and Drs. E. B. Shuttleworth and M. M. Crawford added to the outdoor staff.

The annual meeting of the Maritime Medical Association was held at St. John on the 22nd and 23rd July. There was a large number from the Maritime Provinces, besides a number of medical men from other

parts of Canada and from the United States. Among these were Drs Morris, H. Richardson and E. W. Cushing, Boston; Drs. D. E. Armstrong, C. W. Wilson, F. A. Lockhart and D. J. Evans, Montreal.

Dr. F. X. Valade, Ottawa, was honored recently by the medical board of the General hospital, Water street, when he was presented with a handsome diamond necktie pin. The occasion was his retirement after almost 25 years of service, from the active staff of the institution to accept a place on the staff of consulting physicians The presentation was made in most happy terms by the president of the board, Sir James Grant.

BOOK REVIEWS.

GYNÆCOLOGY.

A Text-Book for Students and a Guide for Practitioners. By William R. Pryor, M.D., Professor of Gynæcology in the New York Polyclinic Medical School; Attending Gynæcologist New York Polyclinic Hospital; Consulting Gynæcologist St. Vincent's Hospital, New York City Hospital, and St. Elizabeth's Hospital; Membre Fondateur Congress International de Gynæcologie et d'Obstetrique; Fellow of The American Gynæcological Society; Fellow New York Academy of Medicine. D. Appleton and Company, Publishers, 436 Fifth Avenue, New York. Toronto: G. N. Morang & Co. Cloth, $3.50.

The volume before us is a handsome one of 380 pages. The author has carefully avoided the less useful methods of medical and surgical treatment of the diseases peculiar to women. He gives, with clearness, the most accepted methods. All discussion on the more scientific topics, such as bacteriology, find no place in the book.

By these means the book is kept within comparatively small size, and yet everything is found in it that is likely to be met with, even by the specialist. He devotes considerable space to the treatment of disease and the performance of operations by the vaginal route, yet he admits that many cases arise where the abdominal route is alone suitable. He, therefore, gives both methods fully.

The literary style is good. The author has an easy and graceful mode of expression, and thereby greatly enhances the usefulness of his book. The illustrations are very artistic and are mostly original. It has not been our fortune to examine any book that will better repay study than this one from the pen of Dr. Pryor. We congratulate both author and publisher upon the results of their efforts to give the medical profession a really good book.

DISEASES OF THE SKIN, THEIR DESCRIPTION, PATHOLOGY, DIAGNOSIS, AND TREATMENT WITH SPECIAL REFERENCE TO THE SKIN ERUPTIONS OF CHILDREN AND AN ANALYSIS OF FIFTEEN THOUSAND CASES OF SKIN DISEASE.

By H. Radcliffe-Crocker, M.D., (Lond.), F.R.C.P., Physician for diseases of the skin in University College Hospital; Honorary member of the American Dermatological Society; Membre Correspondant Étranger de la Société Francaise de Dermatologie; Correspondierendes Mitglied der Wiener Dermatologischen Gesselschaft; Socio Onorario della Società Italiana di Dermatologia e Sifilografia; Last Physician to the East London Hospital for Children; Examiner in Medicine, Apothecaries' Hall, London. Third edition, revised, rewritten and enlarged. With 4 plates, 2 of which contain 12 colored figures, and 112 other illustrations. Octavo. 1466 pages. Cloth $5.00; Sheep, $6.00, net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. Toronto: Messrs Chandler & Massey.

Crocker on the Skin is a book built entirely upon superior merit It has been acknowledged by the American medical press as "the best text-book in the English language." The new third edition maintains this high standard of excellence. Coming at a time when recent progress in dermatology makes an authoritative work upon the subject a positive necessity, its announcement therefore is considered of special importance by the publishers, and it is believed the same view will be taken by the profession. It is a safe, accurate, eminently practical and strictly modern treatise, well and clearly written by a man of large experience and most excellent judgment. Though completely scientific, it is written in such a happy manner that the tyro may follow the writer almost as readily as the expert on diseases of the skin. It will be seen, therefore, that it appeals to general practitioners as well as specialists; while to the student it will serve as a valuable guide when he enters upon the more arduous task of practice.

The etiology, symptomatology, pathology and minute anatomy, constitutional conditions, diagnosis and treatment of each disease mentioned is fully entered upon, the therapeutics, dietetics, and general regimen coming in also for their due share of attention, great strength in the accuracy of statement and method and clearness of definition and differentiation being shown. The newer remedies and bacteriological researches, in their bearing upon dermatology, are carefully noted.

The book proves Dr. Crocker to be closely in touch with the work and teaching of modern dermatology; and he has sifted from the vast accumulations of recent literature, the facts and opinions which have a definite value and are worthy of permanent record. The illustrations, too, showing as they do the morbid conditions of the different structures affected in diseases of the skin, are a not unimportant feature.

Many valuable additions to the text are noted in the new third edition of this standard work. The whole book has been systematically gone over and numerous changes made where recent progress in dermatology and a more exact knowledge of the subject has dictated. The result is a work every page of which bears the impress of thoroughness and large personal experience.

MATERIA MEDICA FOR NURSES.

By John E. Groff, Ph. G.; Apothecary in Rhode Island Hospital, Professor of Materia Medica, Botany and Pharmacognosy in the Rhode Island College of Pharmacy. Second edition, revised and re-written. Philadelphia: P. Blackiston's Son & Co. Toronto: Messrs. Chandler and Massey. Price $1.25, net.

We have taken considerable pains to examine this little book, and can speak in very high terms of its value for nurses. It is not padded out with useless details, nor encumbered with the descriptions of drugs and preparations with which nurses could not be reasonably expected to become acquainted. We can recommend this book to those who have the selection of text books for nurses. We feel sure that any class of nurses who master this book will have a perfectly competent knowledge of all that is necessary for them to know on this branch of their education. It is strongly bound and of neat size.

ANALYSIS OF THE SEXUAL IMPULSE—LOVE AND PAIN—THE SEXUAL IMPULSE IN WOMEN.

Third volume in series.

STUDIES IN THE PSYCHOLOGY OF SEX.

By Havelock Ellis, L. S. A., (England); Fellow of the Medico-legal Society of New York and Anthropological Society of Berlin; Honorary fellow of the Chicago Academy of Medicine, etc.; general editor of the Contemporary Science series since 1899. Extra cloth, $2.00 net, delivered. Sold only to physicians, lawyers, clergymen, advanced teachers, and scientists. Philadelphia, Pa. F. A. Davis Company, publishers, 1914-16 Cherry Street.

Havelock Ellis has long been known as an ardent student of the problems that lie at the foundation of sexual psychopathic states. In weak hands, it is often a hackneyed and uninteresting subject, but in Mr. Ellis' hands it becomes a very useful branch of medical study. Those who are familiar with such works as those of Krafft-Ebing and the Italian School of Alienists will be prepared to admit that the sexual functions play an important role in the evolution of certain forms of insanity and perversions. In this regard the writings of Mr. Ellis have done much good. The present volume is a valuable addition to what he has already accomplished in this field of study.

SURGICAL ASEPSIS.

Especially adapted to operations in the home of the patient.

By Henry B. Palmer, M.D., Consulting Surgeon to the Central Maine General Hospital. Ninety Illustrations. Pages VI-231. Size, large 12 mo. Extra cloth. Price $1.25 net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street.

Here we have a first class little book on an important subject. Many books have been written upon antiseptics, asepsis and disinfectants. One would have thought that there was no need for another. This notion is dispelled by a perusal of Dr. Palmer's book. It is an excellent one for the doctor to read who does any surgery or obstetric practice and an indispensable companion for the trained nurse, or the nurse in charge of any operating room, or a surgical ward. It is one of those books that can be turned to with confidence, as it is full of "pointers."

THE EXPECTANT MOTHER.

A treatise on the care of the expectant mother during pregnancy and childbirth and the care of the child from birth to puberty.

By W. Lewis Howe, M.D. Pages VIII-63. Size small 12 mo. Extra cloth. Price 50 cents net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This is a very neat little book; but what is of far more importance, it is a trustworthy guide on the subjects discussed in its pages. The advice giving to the class of readers for whom it is intended is very appropriate and in well selected language. Although the book is an unpretentious one, judged by its size, yet we venture the opinion that many practitioners would find it very convenient for ready reference on the questions that belong to maternity. Doctors would do well to recommend it to their patients.

PRACTICAL APPLICATION OF RÖNTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS.

By William Allan Pusey, A. M., M. D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B. S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York. Handsome octavo volume of 591 pages, with 180 illustrations, nearly all clinical. W. B. Saunders & Co., 1903. Cloth, $4.50 net; Sheep or Half Morocco, $5.50 net. Toronto: J. A. Carveth & Co.

It has been the aim of the authors of this work to elucidate fully the practical aspects of the subject. It is evident that all the authentic literature which has developed since Röntgen's wonderful discovery has been carefully digested, this being supplemented by the extensive

experience of the authors. The value of the X-rays in diagnosis has been discussed in a thoroughly practical manner, and their limitations in this field indicated. Particular attention has been devoted to the use of the X-rays in therapeutics. Nearly all the illustrations in this section represent actual clinical subjects, and show with unusual fidelity the condition before the use of the X-rays, at various stages of their application, and finally, the therapeutic results obtained. Full details are also given as to the use and management of the apparatus necessary for X-ray work. All the methods with which the best results have been achieved have been carefully described in a comprehensive way. There are chapters on X-ray Tubes, Induction Coils and Controlling Apparatus, Static Machines, Fluoroscopy, Radiography, Photographic Materials Used in Radiography, etc. This section is also fully illustrated with instructive photographs and drawings of the apparatus, including four beautiful full paged colored plates of X-ray tubes. In fact, the work will be found of invaluable assistance, not only to the general practitioner, but also to the dermatologist, presenting, as it does, the very latest advances in X-ray therapeutics and diagnosis.

MODERN MATERIA MEDICA AND THERAPEUTICS.

Third Edition, Greatly Enlarged, Rewritten and Reset.

By A. A. Stevens, A. M., M. D., Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal and St. Agnes Hospitals, Philadelphia. Handsome octavo of 663 pages. W. B. Saunders & Company, 1903. Cloth, $3.50 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Since the appearance of the last edition of this book such rapid advances have been made in materia medica, therapeutics, and the allied sciences, that the author has wisely rewritten the entire work. He has altered the general plan of the book considerably, and instead of considering the drugs in alphabetical order, as in the previous editions, he has classified them according to their pharmacologic action. This arrangement, notwithstanding the present unsettled state of pharmacology, possesses certain advantages in that it aids the student to correlate established facts, and to apply them more readily to the treatment of disease.

The part devoted to Therapeutics has evidently undergone a thorough revision; and we note that all the newer remedies which have been shown by competent observers to possess real merit and to be worthy of a more extended trial at the hands of the profession, have been considered. Indeed, the work is in every particular thorough and accurate, and its title, Modern Materia Medica and Therapeutics, is fully justified. We heartily commend the work to students and practitioners.

LEA'S SERIES OF POCKET TEXT-BOOKS. BACTERIOLOGY.

A Manual for Students and Practitioners.

By Fred. C. Zapffe, M. D., Professor of Pathology and Bacteriology in the Illinois Medical College; Professor of Histology in the Department of Medicine and in the School of Dentistry of the University of Illinois, Chicago. Series Edited by Bern. B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon, Bellevue Hospital, New York. Illustrated with one hundred and forty-six engravings and seven colored plates. Lea Brothers & Co., New York and Philadelphia. Price,

This volume belongs to a well known and useful series of manuals. Each volume of the series is a monograph written by a specialist on the subject covered by the volume. The present volume takes up the interesting subject of bacteriology. This subject occupies a large place at the present moment in medical science. No medical practitioner can be said to be abreast of the times, who does not keep himself conversant with the latest views on bacteriology. The volume under review contains all that is really of importance upon the subject of bacteriology. The classification of bacteria is given fully. The relationship of micro-organisms to disease receives due attention. The methods of examination and culture-making are clearly stated. Disinfection is taken up and careful instruction laid down. The illustrations are very good, and the press-work excellent. It affords us much pleasure to recommend this work on bacteriology by Dr. Zapffe.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, &c., &c.; assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Vol. II., June, 1903, Surgery of the Abdomen and Hernia—Gynecology—Diseases of the Blood and Ductless Glands—Hæmorrhagic Diseases—Metabolic Diseases—Ophthalmology. Lea Brothers & Co., Philadelphia and New York. Price $2.50.

Every physician—at least every progressive physician—on this continent is familiar with "Progressive Medicine". These quarterly volumes are models of the book-making art. The binding, type, paper, and illustrations are all that the most exacting could desire. A book might, however, possess all these qualities and not be of much value, if the matter contained within its covers was defective either by being carelessly written, or injudiciously selected. Neither of these faults can be charged to "Progressive Medicine." The various volumes are well written and contain the latest and best upon the subjects discussed in

each volume. The sections of the present volume are contributed by Drs. John G. Clark, William B. Coley, Edward Jackson, and Alfred Stengel. Their names may be safely taken as a guarantee of the merit of the various portions of the volume. "Progressive Medicine" is valuable, both as a work of reference and as presenting a historical survey of the progress of medical science. The complete series should find a place in every doctor's library.

URIC ACID IN THE CAUSATION OF DISEASE.

A contribution to the pathology of high blood pressure, headache, epilepsy, nervousness, mental disease, asthma, hay fever, paroxysmal hæmoglobimuria, anæmia, Bright's disease, diabetes, gout, rheumatism, bronchitis, and other disorders, by Alexander Haig, M. A., M. D., Oxon., F. R. C. P., Physician to the Metropolitan Hospital, and the Hospital for Children and Women; late Casuality Physician to St. Bartholomew's Hospital. Sixth edition, with seventy-five illustrations. London: J. & A. Churchill, 7, Great Marlborough Street, 1903. Price, 14s.

Dr. Haig's book has steadily grown in size; and it is equally true that it has as steadily grown in importance and the place it holds in the estimation of the medical profession. There are a number of perennial classics, such as Hilton's "Rest and Pain," C. J. B. William's "Principles of Medicine," John Hunter's "Treatise on Anatomy and Surgery," G. W. Balfour's "Senile Heart," Harvey's "Ciculation of the Blood." Among these we place Haig's "Uric Acid."

Many have been the attempts to explain the phenomena of gout and rheumatism, but none seemed to us satisfactory until we studied the views of Dr. Haig. The more the positions taken in "Uric Acid" are examined, the more they appear to clear up the ground and to meet the difficulties encountered in coming to a decision on the etiology and pathology of gout and rheumatism, and a long list of diseases and derangements of health, in which high arterial tension plays so important a rôle.

The first edition—a small book—appeared ten years ago. The sixth edition is now in the hands of the profession, and contains 950 pages. Such a growth in size, and rapid demand for new editions, could not occur were there not real merit in the work and investigations of the author. We cannot recall any one book that has given us as much pleasure and profit to peruse as has the successive editions of Dr. Haig's "Uric Acid." The best of it all is that it is so original and is such a tonic and stimulant to one's thought. The many phenomena met with, as the uric acid happens to be stored in the liver, or circulating in the blood, are explained in a most lucid and erudite manner. The circu-

lation of the blood, as it is altered by the presence of uric acid in it, is a subject of the utmost interest and importance. As a study of physiological processes, perverted by a certain poison in the blood, we know of no book equal to Dr. Haig's work. Whether one agrees entirely with the teachings of Dr. Haig, or not, the book ought to be in the hands of every practitioner. It opens up extensive questions, and clears the way for useful lines of thought. A study of the book opens up new view points and throws a new and bright light over the whole field of practical medicine.

The publishers have done their part well. The paper, type, and binding could not have been improved upon. We congratulate both author and publishers for giving the profession a work that is doing so much to clear up the pathology of a wide range of conditions.

SURGICAL ANATOMY AND OPERATIVE SURGERY.

For students and practitioners, by John J. McGrath, M.D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-graduate Medical School, Visiting Surgeon to the Harlem Hospital, and Assistant Visiting Surgeon to the Columbus Hospital, New York. Illustrated with 227 illustrations, including colors and half-tones. Pages xiv-559. Royal octavo, extra cloth, $4.00 net; sheep or half Russia $5.00 net delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

This work is the outgrowth of Dr. McGrath's course in operative surgery at the Post-graduate Medical College of New York city.

Recognizing the importance of a thorough knowledge of surgical anatomy, as essential to the study of operative measures, the author gives it due attention in this volume. He treats of the anatomy of each region before describing the operations that are done upon it. This makes the work especially valuable to the general practitioner, who is sometimes of necessity called upon to operate, as well as to the young surgeon just beginning his career. The diagrams, of which there are many, aid greatly in an intelligent reading of the text. The work is one which we can heartily recommend to practitioners, and will certainly prove a useful addition to any medical library. The volume is of convenient size, strongly bound and the print is of the best.

ANATOMY.

A manual for students and practitioners, by W. H. Rockwell, Jr., M.D. Series edited by Bern B. Gallaudet, M.D. Illustrated. Philadelphia and New York; Lea Bros. & Co. Price $2.25.

This volume is really an epitome of Gray's Anatomy and is especially designed for the use of students, who are preparing for examination It will also be found useful for physicians, who wish to make a hurried

review of the more important points of anatomy. It is much fuller and more complete than most books of its type that we have seen. The latest edition of Gray has been followed closely, both in regard to order and description.

The engravings, of which there are some seventy, are taken from Gray and other anatomists. The author has certainly succeeded in placing before the profession a manual that is at once handy and reliable.

The work forms a valuable addition to the series of which it forms a part.

The binding, print, etc., are of the best.

TEXT BOOK ON SURGERY.

For Students and Practitioners, by George Emerson Brewer, A. M., M. D., Lecturer on Clinical Surgery at the College of Physicians and Surgeons, Columbia University, New York; Attending Surgeon to the City Hospital; Junior Surgeon to the Roosevelt Hospital; Consulting Surgeon to the Perth Amboy Hospital; Fellow of the American Surgical Association, etc,, etc. Illustrated with 280 engravings in the text and 7 plates in colors and monochrome. Lea Brothers & Co., New York and Philadelphia, 1903. Price, cloth, $4; leather, $5, net.

Dr. Brewer has given us a small octavo volume of 700 pages. Surgical literature is rich in good books, and it is therefore no easy task to find a place for a new work. This, however, will be largely determined by the merits of the new comer for professional favors. The author claims that he desired to produce a book of medium size, such as could come in between the many small manuals and the larger treatises. In this respect he has succeeded perfectly. The book is one of the medium sized class.

We do not belong to those who measure the value, or usefulness, of a book by its size. There is such a thing as a big little book. We remember having read Lord Macaulay's review of Professor Nare's "Memorials of Lord Burleigh," in which he said that they contained 2,000 quarto pages, 1,500 inches cubic measure, and weighed 16 lbs., and contained nothing after all. This criticism is true of some of our very large medical books. Then again there is the just criticism that some of the smaller manuals are mere dry, useless compilations; and that the materials entering into their make-up would have been better left in their original repositories. Dr. Brewer has successfully avoided the making of a poor big book, and a useless small book. He has given us a valuable medium sized volume.

The various subjects of surgery are touched upon, and the advice given is sound and trustworthy. Dr. Brewer's work is one of the very best of its class.

MEDICAL CHEMISTRY.

A Text Book of Chemistry for Students of Medicine, Pharmacy and Dentistry.

By Edward Curtis Hill, M. S., M. D. Medical Analyst and Microscopist; Professor of Chemistry and Metallurgy in the Colorado College of Dental Surgery; Professor of Chemistry and Toxicology in the Denver and Gross College of Medicine, University of Denver. With 78 illustrations including 9 full page half tone colored plates. Pages XII-323. Crown Octavo. Extra cloth, $3.00 net delivered. Philadelphia, F. A. Davis Company publishers, 1914-16 Cherry Street.

This work comes to fill a real place and to meet a long felt want. The whole range of medical chemistry is treated of under the following headings :—Medical Physics, Chemic Philosophy, Inorganic Chemistry, the Carbon Compounds, Analysis, Incompatibility, Sanitary Chemistry, Toxicology, Physiologic and Pathologic Chemistry, Clinic Chemistry, and an Appendix on some general and useful topics. There is scarcely a subject in the whole range of chemistry, as it pertains to the physician or druggist, that is not treated of in the present volume. Chemistry is often regarded as an uninteresting subject. This is due, in many instances, to the manner in which is handled by the writers upon it. This charge cannot be made against Dr. Hill's work. It is certainly a very valuable addition to the physician's library.

ORGANIC NERVOUS DISEASES.

By M. Allen Starr, M.D., Ph.D., LL.D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, the Medical Department of Columbia University, in the City of New York; Consulting Neurologist to the Presbyterian, St. Vincent's Hospitals, St. Mary's Free Hospital for Children, and to the New York Eye and Ear Infirmary, etc., etc. Illustrated with 275 engravings in the text and 26 plates in colors and monochrome. Lea Brothers & Co., New York and Philadelphia. 1903. Price, cloth, $6 ; leather, $7.

The present volume is a large one, containing 750 octavo pages. It is got up in a very attractive form. The paper and binding are good and the press work and illustrations perfect.

Dr. Starr is a well-known writer on nervous diseases, and his "Familiar Forms of Nervous Diseases," his "Brain Surgery," his "Atlas of Nerve Cells," and his many journal articles have made his name familiar to most doctors. In the present volume he confines his attention solely to organic nervous diseases. Throughout the book the utmost attention is given to diagnosis. If diagnosis is not everything, it is absolutely essential in the study of nervous diseases. Many regard the study of organic nervous diseases as both difficult and uninteresting. This is due to the fact that a proper foundation has not been laid by acquiring a thorough working knowledge of the anatomy and physiology of the nervous system. Without this there is little use proceeding with the study of its special diseases.

Dr. Starr's book will prove a decided help to those who desire to read up the subject of organic nervous diseases. The author gives, both by description and illustration, a sufficient amount of information on the anatomy of the parts affected to render the further study of these diseases interesting and clear. We regard this work by Dr. Starr as a most valuable addition to the literature on neurology. It may well claim a place with the works of Mott, Gowers, Oppenheim, Edinger, Mills, Barker, Hirt, Ross, Bramwell, Obersteiner, Bourneville, Gilles De La Tourette, Strümpell, etc.

All the organic diseases of the brain, spinal cord and nerves find a place in the book. The author's style is clear and impressive. We can highly commend the book, and trust it may meet with what it merits, a large sale.

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

Twenty-Sixth Annual Report, 1902, Trenton, N.Y.: The J. L. Murphy Publishing Co., Printers.

This issue of the year's work of the New Jersey State Board of Health contains considerable useful information on sanitary science, and the prevention of disease. Those interested in such subjects will do well to consult it.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

At its 26th Annual Meeting, held in Boston, Mass., September 18th, 19th, and 20th, 1902, by Frank Hugh Montgomery, M.D., Secretary. Chicago, P. F. Pettibone & Co.

The transactions for the year 1902 are of much interest. Scattered throughout the volume are a number of excellent illustrations. The papers are of a high order of merit. These "transactions" will prove of much value to those taking an interest in dermatology.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION, FOR THE YEAR, 1902.

Vol. XVIII. Philadelphia, Printed for the association.

The present volume contains much information on the subject of climates, and their influence on the various forms of disease. The volume is full of attractive illustrations. The secretary and treasurer of the Association is Guy Hinsdale, M.D., Philadelphia. We can recommend these "transactions" to any one desiring information on the climates of America.

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